



भारत सरकार

रेल मंत्रालय

GOVERNMENT OF INDIA
MINISTRY OF RAILWAYS

CRITICAL SPARE PARTS LIST FOR UTV PHOOLTAS

Series No. 202000106-H TO
202208171-H, 202102060-P to
202203067-P



अनुसंधान अभिकल्प एवं मानक संगठन लखनऊ-226011
RESEARCH DESIGNS AND STANDARDS ORGANIZATION
Lucknow-226011

PREFACE

For maintenance of any machine, timely availability of spare parts and consumables play an important role. Thus, to keep the machine in sound condition, first and foremost prerequisite is availability of spares and consumables. As there are thousands of items/spares which are required for maintenance of machine, it is very much required to identify critical spares which are vital and in turn, to ensure availability of such spares well within the scheduled time.

On the basis of experience of Track machine working on Indian Railways, a need for this list was felt. Accordingly list for Critical Spares of UTV (Phooltas), have been prepared. It may be noted that this is the list of spares required for the normal maintenance of the machine for one year only and does not include the spares required for IOH, POH and other spl.maintenance. Requirement for such schedule maintenance (IOH/POH) and emergency maintenance /attention, may be assessed separately on need basis by zonal railways itself.

(Jainendra Kumar Singh)
Director Track Machine-VI

INDEX

SNo	Description	Page Number
1.	GENERAL LAYOUT – UTV (401000100)	1
2.	PNEUMATIC CIRCUIT(401080000)	2-3
3.	HYD. POWER PACK WITH STB. CONTROL & SLEW RESRICT CONTROL CIRCUIT FOR PALFINGER CRANE –(401090000)	4-6
4.	HYD.CIRCUIT STABILIZER CYLINDER-(4B0101090100)	7-8
5.	ELECTRICAL CIRCUIT – (401100000)	9-10
6.	ACKNOWLEDGEMENT	11

SITE - At machine

STMD - Satellite depot

ZTMD - Zonal depot

2527168/2024/O/o PED/INFRA-1/RDSO

GENERAL LAYOUT – UTV (401000100)

S.No	Brief description	Part no.	QTY./MC.	Estt. cycle Yrs.	Life in	Requirement per m/c		
						SITE	STMD	ZTMD
1.	TRANSMISSION ASSLY.	401010300 02	01	08	-	-	-	0.125*
2.	DROP DOWN GEAR BOX ASSLY	401180000 03	01	08	-	-	-	0.125*
3.	CARDAN SHAFT – I (FRONT)	401010401 04	01	04	-	-	-	0.25*
4.	CARDAN SHAFT-II (REAR)	401010402 05	01	04	-	-	-	0.25*
5.	AXLE DRIVE GEAR BOXES ASSLY	401120000 06	02	08	-	-	-	0.25*
6.	AXLE BOXES ASSLY.	401050000 08	04	08	-	-	-	0.5*
7.	SUSPENSION ASSLY.	401030000 09	04	08	-	-	-	0.5*
8.	CLASP TYPE BRAKE ASSLY.	401040000 10	04	08	-	-	-	0.5*
9.	CONTROL PANELS	401140200 12	01	08	-	-	-	0.125*
10.	MARKER LIGHT	401000100 14	02	02	01	-	-	-
11.	TRANSITION C.B.C COUPLERS	401000100 17	02	10	-	-	-	0.2*
12.	BUFFERS	401000100 18	04	10	-	-	-	0.4*
13.	HEAD LIGHTS	401000100 19	02	02	01	-	-	-
14.	RADIATOR ASSLY	401010202 20	01	08	-	-	-	0.125*
15.	ELECTRICAL WIPER ASSLY	401000100 21	02	04	-	-	-	0.5*
16.	DOUBLE TONE PNEUMATIC HORN (LO / HI)	40100010022	02	04	-	-	-	0.5*
17.	DAMPERS	401000100 24	04	08	-	-	-	0.5*
18.	OUTRIGGERS ASSLY.	401000100 26	04	08	-	-	-	0.5*
19.	FLASHER LIGHT	401000100 27	02	02	01	-	-	-
20.	HOOTER	40100010032	02	02	-	-	-	-
21.	OUTRIGGER SAFETY LOCKS	401000100 35	04	04	-	-	-	-

***Note: Minimum Quantity 1**

PNEUMATIC CIRCUIT (401080000)

S.NO.	DESCRIPTION	PART NO.	QTY./MC.	Estt. Life cycle in Yrs.	Requirement per m/c		
					SITE	STMD	ZTMD
1.	COMPRESSOR IN BUILT WITH ENGINE	401080000 01	01	08	-	-	0.125*
2.	CDC WITH 5 LTS. RESERVOIR AND DRAIN COCK	401080000 03	01	08	-	-	0.125*
3.	3/4" ISOLATING COCK	401080000 04	02	04	-	-	0.5*
4.	1" CHECK VALVE	401080000 06	02	02	01	-	-
5.	J – 1 SAFETY VALVE SET AT (8.5 KG./CM ²)	401080000 08	1	02	-	-	0.5*
6.	MR-II 75 LTS.	401080000 10	01	08	-	-	0.125*
7.	½" DRAIN COCK	401080000 11	02	06	-	-	0.3 *
8.	D1 AUTO DRAIN VALVE WITH TIMING CHAMBER	401080000 12	01	02	-	-	0.5*
9.	3/8" ISO COCK WITHOUT VENT	401080000 15	03	06	-	-	0.5*
10.	1/2" ISO COCK WITHOUT VENT	401080000 16	04	06	-	-	0.6*
11.	N1 REDUCING VALVE SET AT 5 KSC	401080000 17	01	02	-	-	0.5*
12.	A9 AUTO BRAKE VALVE	401080000 18	01	02	-	-	0.5*
13.	SA-9 INDEPENDENT BRAKE VALVE	401080000 19	01	02	-	-	0.5 *
14.	GRADUATED HAND CONTROL VALVE FOR PARKING	401080000 20	01	02	-	-	0.5*
15.	RANGE CONTROL CYLINDER SMALL 13 MM STROKE	401080000 21	01	08	-	-	0.125*
16.	RANGE CONTROL CYLINDER BIG 26 MM STROKE	401080000 22	01	08	-	-	0.125*
17.	D1 EMERGENCY BRAKE VALVE	401080000 26	01	02	-	-	0.5*
18.	4" PRESSURE GAUGE (BP)	401080000 27	01	08	-	-	0.125*
19.	PRESSURE GAUGE PARKING	401080000 28	01	08	-	-	0.125 *
20.	DUPLEX PRESSURE GAUGE MR BC	401080000 29	01	08	-	-	0.125*
21.	HOSE WITH DUMMY COUPLING (BP)	401080000 30	02	03	-	-	0.6*

2527168/2024/O/o PED/INFRA-1/RDSO

22.	1-1/4" ANGLE COCK (BP)	401080000 31	02	06	-	-	0.3*
23.	3/8" DOUBLE CHECK VALVE – 24 A	401080000 32	01	02	-	-	0.5*
24.	C2W RELAY VALVE WITH ½" PORT	401080000 33	01	02	-	-	0.5*
25.	N1 REDUCING VALVE (BC)	401080000 34	01	02	-	-	0.5*
26.	C3W DISTRIBUTOR VALVE WITH RESERVOIR	401080000 35	01	02	-	-	0.5*
27.	J-AIR FILTER WITH DRAIN COCK	401080000 36	01	06	-	-	0.167*
28.	PRESSURE SWITCH	401080000 37	01	06	-	-	0.167*
29.	QUICK RELEASE MECHANISM	401080000 38	02	06	-	-	0.34*
30.	2 WAY DIRT COLLECTOR INLINE	401080000 39	01	04	-	-	0.25*
31.	SERVICE BRAKE CYLINDER WITH TRUNNION	401080000 40	04	04	01	-	-
32.	PARKING BRAKE CYLINDER	401080000 41	02	04	-	-	0.5 *
33.	AIR DRYER	401080000 42	01	04	-	-	0.25*
34.	AIR SERVICER UNIT WITH PRESS. REGULATOR	401080000 43	01	04	-	-	0.25*
35.	MANIFOLD BLOCK AL.	401080000 44	01	08	-	-	0.125*
36.	2 POSITION SOLENOID VALVE 1/8" PORT	401080000 45	04	02	01	0.5*	0.5*
37.	DIRECTION CONTROL CYLINDER 17 MM STROKE	401080000 46	02	06	-	-	0.34*
38.	CYLINDER MTG. KIT	401080000 47	02	06	-	-	0.34*
39.	2 POSITION SOLENOID VALVE WITH 24V DC COIL	401080000 48	01	02	-	-	0.5*
40.	QUADRUPLE SYSTEM PROTECTION VALVE	401080000 49	01	02	-	-	0.5*
41.	SINGLE ADJUSTABLE PRESSURE PROTECTION VALVE	401080000 50	01	02	-	-	0.5*
42.	SINGLE ACTING SPRING RETURN CYL.	401080000 51	01	06	-	-	0.167*

*Note: Minimum Quantity 1

HYD. POWER PACK WITH STB. CONTROL & SLEW RESRICT CONTROL CIRCUIT FOR PALFINGER CRANE – (401090000)

SL.NO.	DESCRIPTION	PART NO.	QTY./MC.	Estt. Life cycle in Yrs.	Requirement per m/c		
					SITE	STMD	ZTMD
01.	MAIN PUMP	40109000001	01	06	-	-	0.17*
02.	HOSE R1	40109000002	02	03	-	-	0.67*
03.	HOSE R1	40109000003	01	03	-	-	0.34*
04.	GEAR PUMP	40109000004	01	06	-	-	0.167*
05.	HOSE R2	40109000005	01	03	-	-	0.34*
06.	CHECK VALVE	40109000006	01	06	-	-	0.167*
07.	PRESSURE HOSE	40109000007	02	03	-	-	0.67*
07 A	LOW PRESSURE HOSE	4010900007A	03	03	01	-	-
08.	CHECK VALVE	40109000008	01	06	-	-	0.17*
09.	BELL HOUSING	401BHS02009	01	03	-	-	0.34*
10.	DC. MOTOR 24V	40109000010	01	06	-	-	0.167*
11.	OIL LEVEL GAUGE	40109000011	01	03	-	-	0.34*
12.	PUMP DRIVE SLEEVE	401DSCP0212	01	06	-	-	0.167*
13.	BALL VALVE	40109000013	01	06	-	-	0.167*
14.	SHUT OFF COCK	40109000014	01	06	-	-	0.167*
15.	FILLER BREATHER	40109000015	01	04	-	-	0.25*
16.	RETURN FILTER	40109000016	01	0.25	02	01	1
17.	HOSE R1	40109000017	02	03	-	-	0.67*

2527168/2024/O/o PED/INFRA-1/RDSO

18.	HOSE R1	40109000018	01	03	-	-	0.34*
19.	SUCTION STRAINER	40109000019	01	03	-	-	0.34*
20.	SUCTION STRAINER SMALL (OPTIONAL)	40109000020	01	03	-	-	0.34 *
21.	LIMIT SWITCH	40109000021	02	06	-	-	0.34*
22.	MANIFOLD BLOCK 6 PORT	40109000022	01	03	-	-	0.34*
23.	GEAR COUPLING	40109MFD623	01	08	-	-	0.125*
24.	TANK ASSLY.	40109000024	01	08	-	-	0.125*
25.	SOLENOID CONTROL 2 POSITION	40109020025	02	06	-	-	0.34*
26.	SUB PLATE	40109000026	02	08	-	-	0.25*
27.	SLEW HOSE R2	40109000027	02	03	-	-	0.67*
28.	HOSE R2	40109000028	06	03	01	0.5*	0.5*
29.	HOSE PIPE R1	40109000029	01	03	-	-	0.34
30.	FILTER ELEMENT	40109000030	01	0.25*	02	01	1
31.	SUB PLATE 06 SIZE SERIES	40109000031	01	08	-	-	0.125*
32.	MANUAL DIRECTION CONTROL VALVE	40109000032	01	06	-	-	0.167*
33.	HYDRAULIC MANUAL CONTROL VALVE	40109000033	01	06	-	-	0.167*
A.	STR	401090000A	01	06	-	-	0.167*
B.	SQUIRE 4 BOLT FLANGE	401090000B	01	08	-	-	0.125*
C.	M.S WELDABLE NIPPLE	401090000C	02	04	-	-	0.5*
D.	SEA 4 BOLT FLANGE	401090000D	01	08	-	-	0.125*

2527168/2024/O/o PED/INFRA-1/RDSO

E.	M.S STR	401090000E	07	06	01	0.084*	0.084*
F.	M.S WELDABLE NIPPLE AND CAP NUT	401090000F	02	04	-	-	0.5*
G.	M.S STR	401090000G	02	06	-	-	0.34*
H.	M.S STR	401090000H	04	06	-	-	0.67*
I.	M.S STR	401090000I	01	06	-	-	0.17*
J.	M.S STR	401090000J	01	06	-	-	0.17*
K.	M.S STR	401090000K	01	06	-	-	0.17*
L.	M.S STR	401090000L	01	06	-	-	0.17*
M.	M.S STR	401090000M	02	06	-	-	0.34*
N.	M.S STR	401090000N	03	06	-	-	0.5*
O.	M.S MANIFOLD 4 PORT	401090000O	01	03	-	-	0.34*
P.	M.S STR	40109MFD4P	01	06	-	-	0.17*
Q.	SUCTION TUBE	401090000Q	01	06	-	-	0.17*
R.	PRESSURE TUBE	401090024R	01	06	-	-	0.17*
S.	ADAPTER	401090012S	12	02	02	02	2
T.	PLUG	401090000T	01	02	-	-	0.5*

*Note: Minimum Quantity 1

S.NO.	DESCRIPTION	PART NO.	QTY./MC.	Estt. Life cycle in Yrs.	Requirement per m/c		
					SITE	STMD	ZTMD
01.	ST. UNION	401090100 01	08	04	01	0.5*	0.5*
02.	HOSE PRESSURE LINE	401090100 02	04	03	01	0.17*	0.167*
03.	‘O’ RING	401090100 03	08	04	01	0.5*	0.5*
04.	JUNCTION BLOCK	401090104 04	02	04	-	-	0.5*
05.	ST. UNION	401090100 05	30	04	04	1.75*	1.75*
06.	SWIVEL NUT	401090100 06	44	06	04	1.67*	1.67*
07.	NIPPLE	401090100 07	44	04	05	3	3
08.	‘O’ RING	401090100 08	60	04	07	4	4
09.	STEEL TUBE	401090109 09	08	06	01	0.16*	0.17*
10.	NIPPLE	401090100 10	20	04	03	1	1
11.	SWIVEL NUT	401090100 11	20	06	03	0.16*	0.17*
12.	UNION FITTING	401090100 12	08	04	01	0.5*	0.5*
13.	HOSE PRESSURE LINE	401090100 13	08	03	01	0.84*	0.83*
14.	HOSE PRESSURE LINE	401090100 14	02	03	-	-	0.67*
15.	WELDABLE ADAPTOR	401090100 15	32	06	03	1.17*	1.16*
16.	STEEL TUBE	401090116 16	04	06	-	-	0.67*
17.	STEEL TUBE	401090117 17	04	06	-	-	0.67*
18.	TEE FITTING	401090100 18	04	04	01		-
19.	STEEL TUBE	401090119 19	04	06	-	-	0.67*
20.	STEEL TUBE	401090120 20	04	06	-	-	0.67*
21.	H.P BALL VALVE	401090100 21	04	06	-	-	0.67*
22.	WELDABLE ADAPTOR	401090100 22	04	06	-	-	0.67 *

2527168/2024/O/o PED/INFRA-1/RDSO

23.	P.O CHECK VALVE	401090100 23	04	06	-	-	0.67*
24.	ST. UNION	401090100 24	04	04	01	-	-
25.	SWIVEL NUT	401090100 25	04	06	-	-	0.67*
26.	NIPPLE	401090100 26	04	01	02	1	1
27.	'O' RING	401090100 27	04	04	01	-	
28.	STEEL TUBE	401090128 28	04	06	-	-	0.67*
29.	MALE – FEMALE ADAPTOR	401090100 29	04	06	-	-	0.67*
30.	STABILIZER CYLINDER	40109FC30 30	04	02	01	0.5*	0.5*
31.	MANUAL CONTROL VALVE	401090100 31	01	06	-	-	0.17*
32.	TEE FITTING	401090100 32	02	04	-	-	0.5*
33.	WELDABLE ADAPTOR FITTING	401090100 33	06	06	-	-	-
34.	STEEL TUBE	401090134 34	06	06	-	-	-

***Note: Minimum Quantity 1**

ELECTRICAL CIRCUIT – (401100000)

SL.NO.	DESCRIPTION	PART NO.	QTY./MC	Estt. Life cycle in Yrs.	Requirement per m/c		
					SITE	STMD	ZTMD
1.	MS BOX 4 WAY WITH 3 PUSH BUTTON SWITCH	401100000 01	04	03	01	0.17*	0.17*
2.	METAL CLAD PLUG, SOCKET 3 PIN, 20 AMP.	401100000 02	08	03	01	0.85*	0.84*
3.	LIMIT SWITCH ROLLER LEVER PT.NLLA	401100000 03	06	03	01	0.5*	0.5 *
4.	FOG LIGHT 24V DC YELLOW.	401100000 06	02	01	01	0.5*	0.5*
5.	TWIN BEAM HEAD LIGHT RDSO SPECIFICATION.	401100000 07	02	01	01	0.5*	0.5*
6.	FLUSH REVOLVING LIGHT 24 V DC WITH BULB	401100000 08	01	01	01	-	-
7.	ELECTRICAL HOOTER MODEL - VHOO3D, 24VDC	401100000 09	02	03	-	-	0.67*
8.	SOLENOID VALVE 2/2 FOR HORN 24 VDC	401100000 13	02	06	-	-	0.34*
9.	GOVERNOR MAGNET VALVE 24 VDC (OPTIONAL)	401100000 14	01	06	-	-	0.17*
10.	PRESSURE SWITCH FOR EPG SET AT 8-7Kg/cm ²	401100000 15	01	03	-	-	0.34*
11.	2 POSITION SOLENOID VALVE (CLUTCH CUTT-OFF)	401100000 16	01	06	-	-	0.17*
12.	PRESSURE SWITCH FOR ENGINE THROTTLE IDLE AND BRAKE	401100000 17	01	03	-	-	0.34*

2527168/2024/O/o PED/INFRA-1/RDSO

	LIGHTS						
13.	FLUID LEVEL SENSOR UNIT,24V DC, PT-4538 FUEL	401100000 18	01	03	-	-	0.34*
14.	WATER LOW LEVEL FLOAT SENSOR UNIT,24V DC	401100000 19	01	03	-	-	0.34*
15.	DIODE PCB WITH CONNECTOR (20 NOS.IN5408)	401100000 20	01	03	-	-	0.34*
16.	INDICATOR ASSLY LED 24 V DC GREEN	401100000 22	07	03	01	0.65*	0.67*
17.	RELAY 8 PIN MODEL NO. MKS2P-24V DC	401100000 23	02	03	-	-	0.67*
18.	TOGGLE SWITCH 1- POLE ON-OFF-ON 15 AMP	401100000 24	05	03	01	0.35*	0.34*
19.	AL ENGINE ECU (BOSCH)	401100000 25	01	03	-	-	0.34*
20.	MS BOX 3 WAY WITH 3 PUSH BUTTON SWITCH	401100000 26	02	03	-	-	0.67*
21.	RED EMERGENCY SWITCH MASHROOM TYPE WITH LOCK	401100000 28	07	03	01	0.65*	0.67*
22.	2 POSITION HYD. SOLENOID VALVE (SLEW CONTROL)	401100000 29	02	06	-	-	0.34*
23.	2 POSITION SOLENOID VALVE (TRANS. SHIFT CONTROL)	401100000 32	04	06	-	-	0.67*
24.	SEARCH LIGHT ASSEMBLY, SIZE - 8"	401100000 31	02	03	-	-	0.67*

***Note: Minimum Quantity 1**

ACKNOWLEDGEMENT

Following officer and staffs have made their valuable contributions in finalization of Critical Spare Part List for Utility Track Vehicle (Phooltas).

RAILWAYS:-

1. Shri Anil Mandal (SSE/TM)

RDSO:-

1. Shri Rakesh Tiwari (ARE/TMM)
2. Shri Ved Prakash Srivastava (SSE/TMM)
3. Shri Vivek Tewari (JRE/TMM)