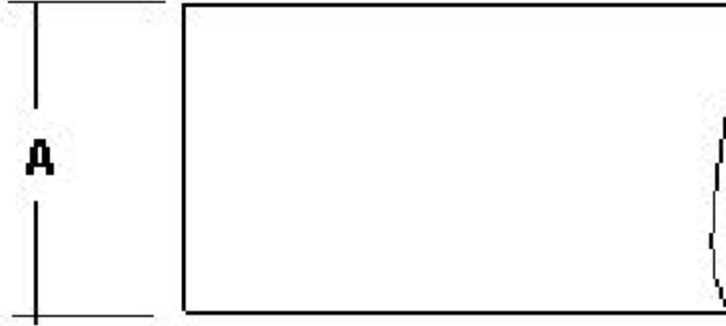


Doc No: OPS-180/00

ERP No :

TS No :

OPERATION STANDARD**ALL DIMENSIONS ARE IN (mm) UNLESS OTHER WISE SPECIFIED**

S.No	PARAMETER	SPECIFICATION	INSPECTION METHOD	NATURE OF PARAMETER
A	ACROSS FLAT	21.80 / 22.0	DIGIMATIC VERNIER(0-150)	Major
B	APPEARANCE	FREE FROM MIX-UP	VISUAL	Major
C	APPEARANCE	FREE FROM BEND	VISUAL	Major
D	APPEARANCE	FREE FROM DAMAGES	VISUAL	Major
Z1	PHYSICAL AND CHEMICAL PROPERTY	COMPARE STANDARD	VENDOR INSPECTION REPORT	Major

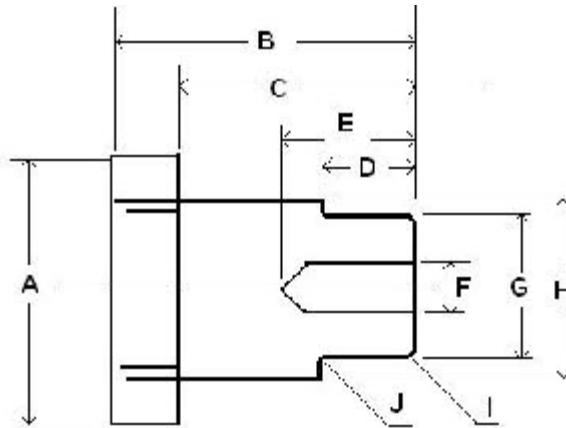
GENERAL TOLERANCE UNLESS OTHER WISE SPECIFIED

ANGLE (Degrees)				OTHERS (mm)		
DIMENSIONS	0/10	10/50	50/120	0/6	6/30	30/120
TOLERANCE ±	1°	0°30'	0°20'	0.1	0.2	0.3

REACTION PLAN :**1.Place all non-conforming parts in red box****2.in case of Emergency/Doubt Stop and inform to Supervisor****3.In Case of dropped Parts,identify with Red Tag and Place in Red Box****ABC ENGINEERS PRIVATE LIMITED**

DES.	Sign	Data	Part Code	10020115H		
DRN			Part Name	22MM HEX EN1A LEADED DRAWN BAR		
CHD			Operation	Material Treatment		
APPD			Customer	XYZ AUTOMOTIVE INDIA LIMITED PLANT	Cus. Code	1160
			Scale	NTS	Rm. Code	Customer Part. No
					10020115H	BV120-031-00D2
					Rm. Spec	Rev. No / Date
Rev	Modification	Date				00 / 13-03-2007
						10020115H

OPERATION STANDARD



ALL DIMENSIONS ARE IN (mm) UNLESS OTHER WISE SPECIFIED

S.No	PARAMETER	SPECIFICATION	INSPECTION METHOD	NATURE OF PARAMETER
A	ACROSS FLAT	21.80 / 22.0	DIGIMATIC VERNIER(0-150)	Minor
B	TOTAL LENGTH	27.30 / 27.70	DIGIMATIC VERNIER(0-150)	Major
C	LENGTH	20.40 / 20.80	DIGIMATIC VERNIER(0-150)	Major
D	LENGTH	10.50 / 11.0	DIGIMATIC VERNIER(0-150)	Major
E	DRILLDEPTH	11.8 / 12.40	DIGIMATIC VERNIER(0-150)	Major
F	INNER DIAMETER	6.0 / 6.8	DIGIMATIC VERNIER(0-150)	Major
G	DIAMETER	18.35 / 18.85	OUTSIDE MICROMETER(0-25)	Minor
H	DIAMETER	20.85 / 21.35	OUTSIDE MICROMETER(0-25)	Minor
I	CHAMFER ANGLE	43°0'0" / 47°0'0"	PROFILE PROJECTOR X 10	Minor
I	CHAMFER LENGTH	0.4 / 0.8	PROFILE PROJECTOR X 10	Minor
J	RADIUS	0.8 / 1.2	PROFILE PROJECTOR X 10	Minor
ZZ	APPEARANCE	M DEEP LINE MARK&T	VISUAL	Minor

GENERAL TOLERANCE UNLESS OTHER WISE SPECIFIED

ANGLE (Degrees)				OTHERS (mm)		
DIMENSIONS	0/10	10/50	50/120	0/6	6/30	30/120
TOLERANCE ±	1°	0°30'	0°20'	0.1	0.2	0.3

REACTION PLAN :

1.Place all non-conforming parts in red box

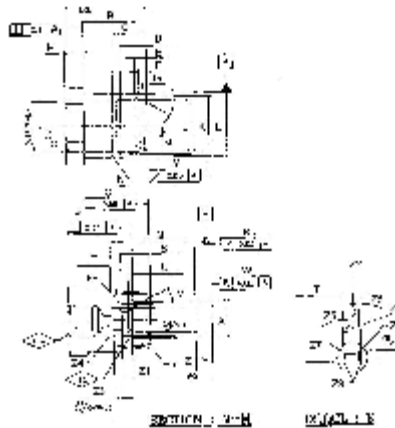
2.in case of Emergency/Doubt Stop and inform to Supervisor

3.In Case of dropped Parts,identify with Red Tag and Place in Red Box

ABC ENGINEERS PRIVATE LIMITED

DES.	Sign	Data	Part Code	20520101N0		
DRN			Part Name	END PLUG - MACHINING		
CHD			Operation	MACHINING	Material Treatment	
APPD			Customer	XYZ AUTOMOTIVE INDIA LIMITED PLANT	Cus. Code	1160
			Rm. Code	Customer Part. No	Drawing No	
			10020115H	BV171-036-00A2		
1	Parameter Modified.	25/07/2014		Rev. No / Date	20520101N0	
Rev	Modification	Date		01 / 25-07-2014		

OPERATION STANDARD



ALL DIMENSIONS ARE IN (mm) UNLESS OTHER WISE SPECIFIED

S.No	PARAMETER	SPECIFICATION	INSPECTION METHOD	NATURE OF PARAMETER
B	LENGTH	20.5 / 20.7	PROFILE PROJECTOR X 10	Major
B1	TOTAL LENGTH	27.0 / 27.4	DIGIMATIC VERNIER(0-150)	Major
C	LENGTH	10.9 / 11.1	PROFILE PROJECTOR X 10	Major
D	LENGTH	8.5 / 9.5	PROFILE PROJECTOR X 10	Major
E	LENGTH	3.7 / 3.9	PROFILE PROJECTOR X 10	Major
F	LENGTH	2.4 / 2.6	PROFILE PROJECTOR X 10	Major
G	CHAMFER LENGTH	1.1 / 1.3	PROFILE PROJECTOR X 10	Major
H	COLLAR THICKNESS	6.5 / 7.0	DIGIMATIC VERNIER(0-150)	Major
I	CHAMFER ANGLE	29°30'0" / 30°30'0"	PROFILE PROJECTOR X 10	Major
J	DIAMETER	15.9 / 16.1	OUTSIDE MICROMETER(0-25)	Major
K	THREAD	M18X1.0-6G	THREAD RING GAUGE-M18X1.0-6G	Major
L	DIAMETER	19.86 / 19.95	OUTSIDE MICROMETER(0-25)	Major
M	RUN OUT	0 / 0.05	THREAD RING GAUGE,DIAL&V-BLOCK	Major
N	CHAMFER	0.2 / 0.4	PROFILE PROJECTOR X 10	Major
O	PERPENDICULARITY	0 / 0.05	HEIGHT GAUGE,DIAL&V- BLOCK	Major
P	PERPENDICULARITY	0 / 0.05	HEIGHT GAUGE,DIAL&V- BLOCK	Major
Q	DEPTH	12.70 / 12.80	FLUSH PIN GAUGE-12.70/12.80	Major

GENERAL TOLERANCE UNLESS OTHER WISE SPECIFIED

ANGLE (Degrees)				OTHERS (mm)		
DIMENSIONS	0/10	10/50	50/120	0/6	6/30	30/120
TOLERANCE ±	1°	0°30'	0°20'	0.1	0.2	0.3

REACTION PLAN :

1.Place all non-conforming parts in red box

2.in case of Emergency/Doubt Stop and inform to Supervisor

3.In Case of dropped Parts,identify with Red Tag and Place in Red Box

ABC ENGINEERS PRIVATE LIMITED

box 2.in case of Emergency/Doubt Stop and inform to Supervisor 3.In Case of dropped Parts,identify with Red Tag and Place in Red Box			DES.	Sign	Data	Part Code	20520102N0		
			DRN			Part Name	END PLUG - CNC MACHINING FIRST OPERATION		
			CHD			Operation	CNC MACHINING FIRST OPERATION		Material Treatment
			APPD			Customer	XYZ AUTOMOTIVE INDIA LIMITED PLANT		Cus. Code 1160
			Scale	NTS		Rm. Code 10020115H	Customer Part. No BV171-036-00A2		Drawing No
1	changed Hence Parameter	25/07/2014				Rev. No / Date			

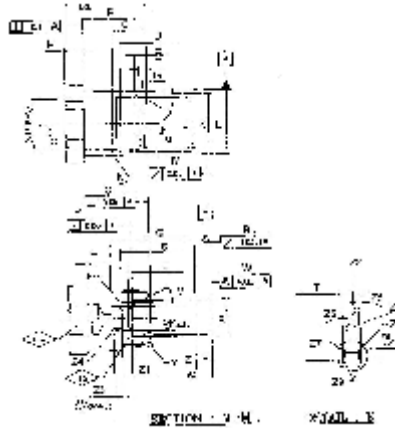
Rev	Modification	Date	Rm. Spec	01 / 25-07-2014	20520102N0
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Doc No: OPS-309/01

ERP No :

TS No :

OPERATION STANDARD



ALL DIMENSIONS ARE IN (mm) UNLESS OTHER WISE SPECIFIED

S.No	PARAMETER	SPECIFICATION	INSPECTION METHOD	NATURE OF PARAMETER
R	RUN OUT	0 / 0.03	HEIGHT GAUGE,DIAL&V- BLOCK	Major
S	LENGTH	9.27 / 9.37	PROFILE PROJECTOR X 10	Major
T	GROOVE WIDTH	2.21 / 2.34	PROFILE PROJECTOR X 10	Major
U	DEPTH	5.73 / 5.83	FLUSH PIN GAUGE-5.73/5.83	Major
V	ANGLE	29°30'0" / 30°30'0"	PROFILE PROJECTOR X 10	Major
W	CONCENTRICITY	0 / 0.05	HEIGHT GAUGE,DIAL&V- BLOCK	Major
X	INNER DIAMETER	11.40 / 11.60	PLUG GAUGE-11.40/11.60	Major
Y	GROOVE DIAMETER	10.28 / 10.36	DIGIMATIC CALIPER GAUGE	Major
Z	INNER DIAMETER	7.73 / 7.76	PLUG GAUGE-7.73/7.76	Significant
Z1	CHAMFER LENGTH	0.2 / 0.4	PROFILE PROJECTOR X 10	Major
Z10	FINISH	0 / 1.6	SURFACE FINISH TESTER	IdentChars
Z2	FINISH	0 / 1.6	SURFACE FINISH TESTER	Major
Z3	FINISH LENGTH	2.64 / 3.34	SURFACE FINISH TESTER	Major
Z4	RADIUS	0 / 0.25	PROFILE PROJECTOR X 10	Major
Z5	ANGLE	0°0'0" / 2°0'0"	PROFILE PROJECTOR X 10	Major
Z6	FINISH	0 / 1.6	SURFACE FINISH TESTER	Major
Z7	RADIUS	0 / 0.4	PROFILE PROJECTOR X 10	Major

GENERAL TOLERANCE UNLESS OTHER WISE SPECIFIED

ANGLE (Degrees)				OTHERS (mm)		
DIMENSIONS	0/10	10/50	50/120	0/6	6/30	30/120
TOLERANCE ±	1°	0°30'	0°20'	0.1	0.2	0.3

REACTION PLAN :

1.Place all non-conforming parts in red box

2.in case of Emergency/Doubt Stop and inform to Supervisor

3.In Case of dropped Parts,identify with Red Tag and Place in Red Box

ABC ENGINEERS PRIVATE LIMITED

DES.	Sign	Data	Part Code	20520102N0		
DRN			Part Name	END PLUG - CNC MACHINING FIRST OPERATION		
CHD			Operation	CNC MACHINING FIRST OPERATION	Material Treatment	
APPD			Customer	XYZ AUTOMOTIVE INDIA LIMITED PLANT	Cus. Code	1160
			Scale	NTS	Rm. Code	Customer Part. No
					10020115H	BV171-036-00A2
1	changed Hence Parameter	25/07/2014			Rev. No / Date	20520102N0

Drawing No

Rev	Modification	Date		Rm. Spec	01 / 25-07-2014	20520102N0
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Doc No: OPS-309/01

ERP No :

TS No :

OPERATION STANDARD

ALL DIMENSIONS ARE IN (mm) UNLESS OTHER WISE SPECIFIED

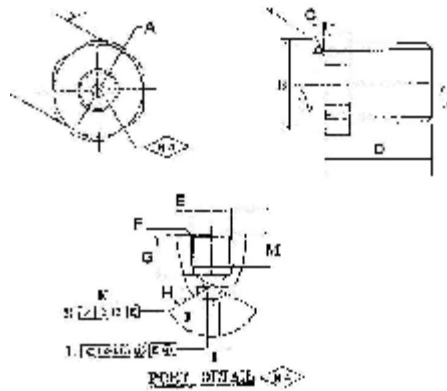
S.No	PARAMETER	SPECIFICATION	INSPECTION METHOD	NATURE OF PARAMETER
Z8	FINISH	0 / 1.6	SURFACE FINISH TESTER	Major
Z9	RADIUS	0 / 0.2	PROFILE PROJECTOR X 10	Major
ZZ	APPEARANCE	BURR ON SEALING AR	VISUAL	Major
ZZ1	APPEARANCE	OM SHARP EDGE&STE	VISUAL	Major
ZZ2	APPEAPANCE(CUT PIECES)	NO BURR & LINE MARK	VISUAL	Major
ZZ3	APPEARANCE	E FROM THREAD DAM	VISUAL	Major

GENERAL TOLERANCE UNLESS OTHER WISE SPECIFIED

	ANGLE (Degrees)			OTHERS (mm)		
DIMENSIONS	0/10	10/50	50/120	0/6	6/30	30/120
TOLERANCE ±	1°	0°30'	0°20'	0.1	0.2	0.3

REACTION PLAN : 1.Place all non-conforming parts in red box 2.in case of Emergency/Doubt Stop and inform to Supervisor 3.In Case of dropped Parts,identify with Red Tag and Place in Red Box			ABC ENGINEERS PRIVATE LIMITED						
			DES.	Sign	Data	Part Code	20520102N0		
			DRN			Part Name	END PLUG - CNC MACHINING FIRST OPERATION		
			CHD			Operation	CNC MACHINING FIRST OPERATION	Material Treatment	
			APPD			Customer	XYZ AUTOMOTIVE INDIA LIMITED PLANT	Cus. Code	1160
			Scale	NTS	Rm. Code	Customer Part. No	Drawing No		
					10020115H	BV171-036-00A2			
1	changed Hence Paramete	25/07/2014			Rm. Spec	Rev. No / Date	20520102N0		
Rev	Modification	Date				01 / 25-07-2014			

OPERATION STANDARD



ALL DIMENSIONS ARE IN (mm) UNLESS OTHER WISE SPECIFIED

S.No	PARAMETER	SPECIFICATION	INSPECTION METHOD	NATURE OF PARAMETER
A	DIAMETER	23.90 / 24.10	PLAIN RING GAUGE-24.10 / 23.90	Major
B	DIAMETER	21.90 / 22.10	PROFILE PROJECTOR X 10	Major
C	ANGLE	9°30'0" / 10°30'0"	PROFILE PROJECTOR X 10	Major
D	TOTAL LENGTH	26.4 / 26.6	DIGIMATIC VERNIER(0-150)	Major
E	THREAD	M10X1.0-6G	THREAD PLUG GAUGE-M10X1.0-6G	Major
F	CHAMFER LENGTH	0.5 / 1.0	PROFILE PROJECTOR X 10	Major
F	CHAMFER ANGLE	43°0'0" / 47°0'0"	PROFILE PROJECTOR X 10	Major
G	DRILL DEPTH	9.5 / 9.7	FLUSH PIN GAUGE - 9.50/9.70	Major
G1	ROUGH DRILL DEPTH	9.20 / 9.40	DIGIMATIC VERNIER(0-150)	Major
G1	ROUGH DRILL DIAMETER	8.7 / 8.8	DIGIMATIC VERNIER(0-150)	Major
H	FINISH	0 / 3.2	SURFACE FINISH TESTER	Major
I	INNER DIAMETER	2.90 / 3.10	PLUG GAUGE-2.90/3.10	Major
J	ANGLE	119°0'0" / 124°0'0"	PROFILE PROJECTOR X 10	Major
K	RUN OUT	0 / 0.13	RUNOUT GAUGE	Critical
L	CONCENTRICITY	0 / 0.13	RUNOUT GAUGE	Major
M	THREAD LENGTH	7.5 / 9.0	DIGIMATIC VERNIER(0-150)	Major
N	FINISH ON FACE	1.6 / 2.3	SURFACE FINSH TESTER-XXX	Major

GENERAL TOLERANCE UNLESS OTHER WISE SPECIFIED

ANGLE (Degrees)				OTHERS (mm)		
DIMENSIONS	0/10	10/50	50/120	0/6	6/30	30/120
TOLERANCE ±	1°	0°30'	0°20'	0.1	0.2	0.3

REACTION PLAN :

1.Place all non-conforming parts in red box

2.in case of Emergency/Doubt Stop and inform to Supervisor

3.In Case of dropped Parts,identify with Red Tag and Place in Red Box

ABC ENGINEERS PRIVATE LIMITED

DES.	Sign	Data	Part Code	20520103N0		
DRN			Part Name	END PLUG - CNC MACHINING SECOND OPERATION		
CHD			Operation	CNC MACHINING SECOND OPERATION	Material Treatment	
APPD			Customer	XYZ AUTOMOTIVE INDIA LIMITED PLANT	Cus. Code	1160
			Rm. Code	Customer Part. No	Drawing No	
			10020115H	BV171-036-00A2		
1	changed Hence Parameter	25/07/2014		Rev. No / Date	20520103N0	

Rev	Modification	Date		Rm. Spec	01 / 25-07-2014	20520103N0
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Doc No: OPS-310/01

ERP No :

TS No :

OPERATION STANDARD

ALL DIMENSIONS ARE IN (mm) UNLESS OTHER WISE SPECIFIED

S.No	PARAMETER	SPECIFICATION	INSPECTION METHOD	NATURE OF PARAMETER
O	COLLAR THICKNESS	5.8 / 6.0	DIGIMATIC VERNIER(0-150)	Major
Z	APPEARANCE	E FROM THREAD DAM	VISUAL	Major
ZZ	APPEARANCE	HARP EDGE AND STEP	VISUAL	Major
ZZ	APPEARANCE	ROM FEEDER MARK O	VISUAL	Major
ZZ4	APPEARANCE	E FROM DOUBLE THRI	VISUAL	Major
ZZ5	APPEARANCE	ROM CONE ANGLE LIN	VISUAL	Major

REACTION PLAN :

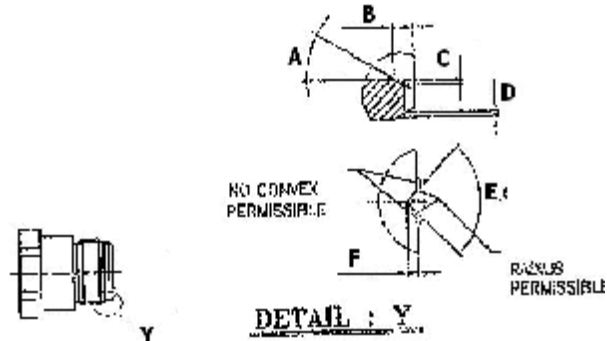
1.Place all non-conforming parts in red box
2.in case of Emergency/Doubt Stop and inform to Supervisor
3.In Case of dropped Parts,identify with Red Tag and Place in Red Box

GENERAL TOLERANCE UNLESS OTHER WISE SPECIFIED

ANGLE (Degrees)				OTHERS (mm)		
DIMENSIONS	0/10	10/50	50/120	0/6	6/30	30/120
TOLERANCE ±	1°	0°30'	0°20'	0.1	0.2	0.3

REACTION PLAN : 1.Place all non-conforming parts in red box 2.in case of Emergency/Doubt Stop and inform to Supervisor 3.In Case of dropped Parts,identify with Red Tag and Place in Red Box			ABC ENGINEERS PRIVATE LIMITED						
			DES.	Sign	Data	Part Code	20520103N0		
			DRN			Part Name	END PLUG - CNC MACHINING SECOND OPERATION		
			CHD			Operation	CNC MACHINING SECOND OPERATION	Material Treatment	
			APPD			Customer	XYZ AUTOMOTIVE INDIA LIMITED PLANT	Cus. Code	1160
			Scale	NTS	Rm. Code	Customer Part. No	Drawing No		
					10020115H	BV171-036-00A2			
1	changed Hence Paramete	25/07/2014			Rm. Spec	Rev. No / Date	20520103N0		
Rev	Modification	Date				01 / 25-07-2014			

OPERATION STANDARD



ALL DIMENSIONS ARE IN (mm) UNLESS OTHER WISE SPECIFIED

S.No	PARAMETER	SPECIFICATION	INSPECTION METHOD	NATURE OF PARAMETER
A	ANGLE	29°30'0" / 30°30'0"	PROFILE PROJECTOR X 10	Major
B	LENGTH	1.1 / 1.3	PROFILE PROJECTOR X 10	Major
C	LENGTH	0 / 0.25	PROFILE PROJECTOR X 10	Major
D	LENGTH	0 / 0.25	PROFILE PROJECTOR X 10	Major
E	SLOT ANGLE	89°30'0" / 90°30'0"	PROFILE PROJECTOR X 10	Major
F	SLOT WIDTH	0.4 / 0.8	PROFILE PROJECTOR X 10	Major
Z1	APPEARANCE	NO CONVEX PERMISSIBLE	VISUAL	Major
Z2	APPEARANCE	FREE FROM DAMAGES	VISUAL	Major

GENERAL TOLERANCE UNLESS OTHER WISE SPECIFIED

ANGLE (Degrees)				OTHERS (mm)		
DIMENSIONS	0/10	10/50	50/120	0/6	6/30	30/120
TOLERANCE ±	1°	0°30'	0°20'	0.1	0.2	0.3

REACTION PLAN :

1.Place all non-conforming parts in red box

2.in case of Emergency/Doubt Stop and inform to Supervisor

3.In Case of dropped Parts,identify with Red Tag and Place in Red Box

ABC ENGINEERS PRIVATE LIMITED

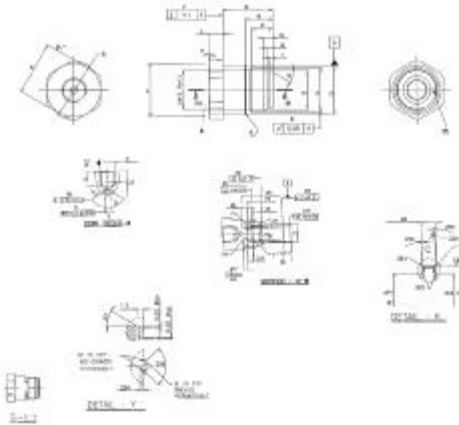
DES.	Sign	Data	Part Code	20520105N0		
DRN			Part Name	END PLUG - SLOTTING		
CHD			Operation	SLOTTING		Material Treatment
APPD			Customer	XYZ AUTOMOTIVE INDIA LIMITED PLANT		Cus. Code 1160
			Scale	NTS	Rm. Code 10020115H	Customer Part. No BV171-036-00A2
					Rm. Spec	Rev. No / Date 00 / 18-12-2007
Rev	Modification	Date				20520105N0

Doc No: OPS-313/01

ERP No :

TS No :

OPERATION STANDARD



ALL DIMENSIONS ARE IN (mm) UNLESS OTHER WISE SPECIFIED

S.No	PARAMETER	SPECIFICATION	INSPECTION METHOD	NATURE OF PARAMETER
ZZ1	APPEARANCE	EP&TOOL MARK ON GF	VISUAL	Major
ZZ2	APPEARANCE	CTROLESS NICKEL PLA	VISUAL	Major
ZZ3	PLATING THICKNESS IN MICRON	8 / 12	VENDOR INSPECTION REPORT	Major
ZZ5	APPEARANCE IN GROOVE AREA	FREE FROM RUST	VISUAL	Major
ZZ7	APPEARANCE	FREE FROM DAMAGE	VISUAL	Major

GENERAL TOLERANCE UNLESS OTHER WISE SPECIFIED

ANGLE (Degrees)				OTHERS (mm)		
DIMENSIONS	0/10	10/50	50/120	0/6	6/30	30/120
TOLERANCE ±	1°	0°30'	0°20'	0.1	0.2	0.3

REACTION PLAN :

1.Place all non-conforming parts in red box

2.in case of Emergency/Doubt Stop and inform to Supervisor

3.In Case of dropped Parts,identify with Red Tag and Place in Red Box

ABC ENGINEERS PRIVATE LIMITED

DES.	Sign	Data	Part Code	20520100N0		
DRN			Part Name	END PLUG		
CHD			Operation	CTROLESS NICKEL PLATING (OUTSOURC	Material Treatment	
APPD			Customer	XYZ AUTOMOTIVE INDIA LIMITED PLANT	Cus. Code	1160
			Scale	NTS	Rm. Code	Customer Part. No
					10020115H	BV171-036-00A2
1	Add Damage Parameter.	25/07/2014			Rev. No / Date	Drawing No
Rev	Modification	Date			01 / 25-07-2014	20520100N0