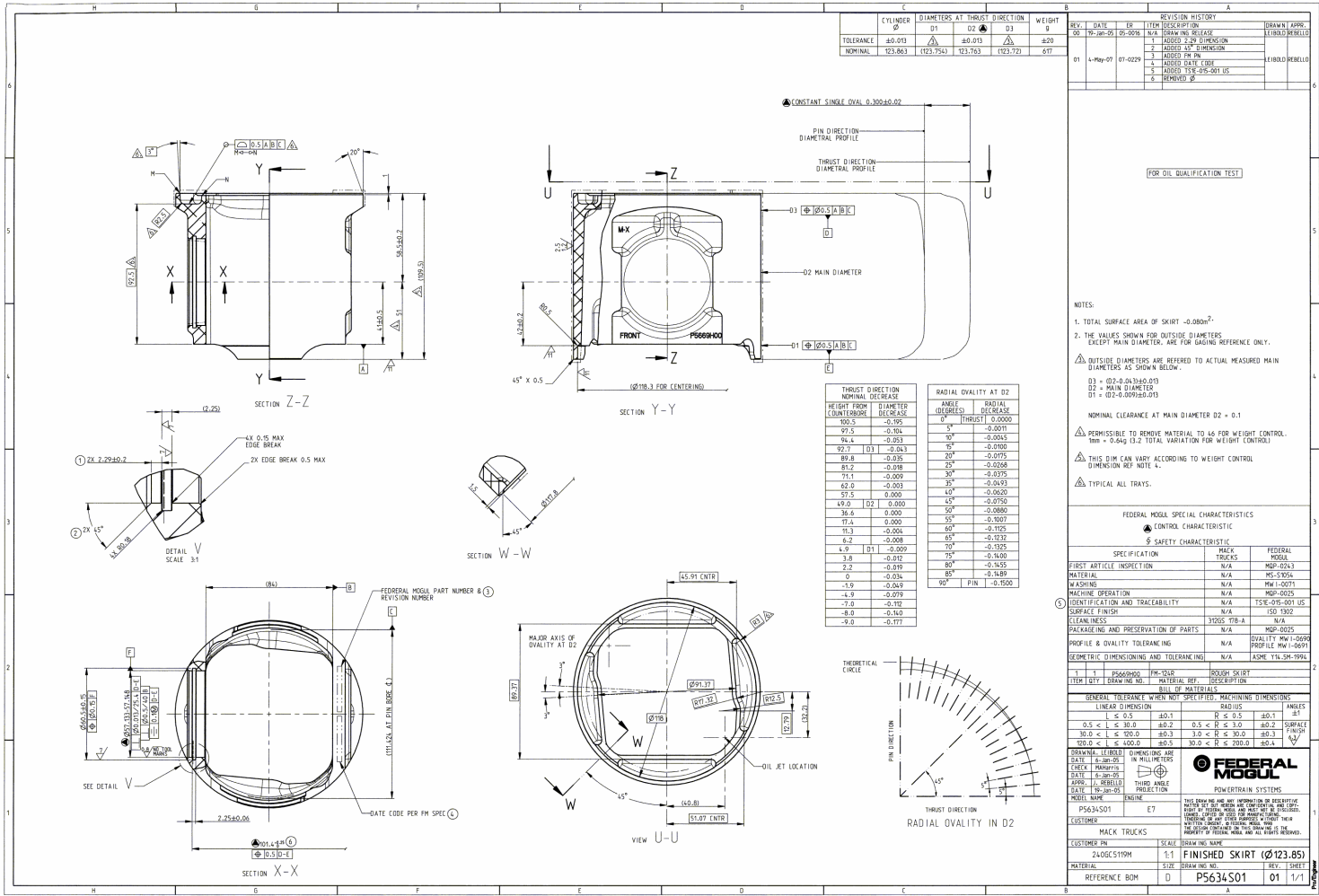


240GCS119M		
GENERAL SPECIFICATIONS		
NO.	SUBJECT	APPLIES TO
312GS178-A	CLEANLINESS	SEE NOTE 2
850GS11	SUPPLIER DWG	

240GCS119M				
REV	NO.	DATE	BY	APPD.
A	1	07/29/95	WJW	WJW
B	2	04/30/96	WJW	WJW
C	3	04/04/00	WJW	WJW
D	4	07/30/07	WJW	WJW



CYLINDER Ø	DIAMETERS AT THRUST DIRECTION			WEIGHT
	D1	D2	D3	
TOLERANCE	±0.013	±0.013	±0.013	±0.20
NOMINAL	123.853	112.754	123.763	1123.773

REVISION HISTORY				
REV.	DATE	BY	DESCRIPTION	DRAWN/APPD.
01	19-SEP-95	05-0095	N/A	FOR OIL QUALIFICATION TEST
1			ADDED 2.54 DIMENSION	
2			ADDED 4.0 DIMENSION	
3			ADDED P/N	
4			ADDED DATE EDGE	
5			ADDED TSE-015-001 US	
6			REMOVED Ø	

THRUST DIRECTION NOMINAL DECREASE			RADIAL OVALITY AT D2		
HEIGHT FROM D1	DIAMETER DECREASE	ANGLE (DEGREES)	THRUST (0.0000)	RADIAL DECREASE	
100.5	-0.155	0°	0°	-0.0011	
97.5	-0.164	5°	5°	-0.0011	
94.4	-0.163	10°	10°	-0.0015	
92.1	-0.163	15°	15°	-0.0100	
89.8	-0.165	20°	20°	-0.0175	
87.2	-0.168	25°	25°	-0.0248	
84.4	-0.169	30°	30°	-0.0319	
82.0	-0.163	35°	35°	-0.0493	
81.5	0.000	40°	40°	-0.0620	
49.0	0.000	45°	45°	-0.0750	
38.8	0.000	50°	50°	-0.0880	
37.8	0.000	55°	55°	-0.1007	
36.3	-0.004	60°	60°	-0.1125	
34.7	-0.008	65°	65°	-0.1231	
32.7	-0.009	70°	70°	-0.1325	
30.8	-0.012	75°	75°	-0.1400	
28.7	0	80°	80°	-0.1455	
26.7	-0.014	85°	85°	-0.1489	
24.7	-0.017	90°	PIN	-0.1500	

NOTES:

- TOTAL SURFACE AREA OF SKIRT = 0.080m²
- THE VALUES SHOWN FOR OUTSIDE DIAMETERS EXCEPT MAIN DIAMETER, ARE FOR GAGING REFERENCE ONLY.
- OUTSIDE DIAMETERS ARE REFERRED TO ACTUAL MEASURED MAIN DIAMETERS AS SHOWN BELOW.
 - D1 = Ø123.854(0.013)
 - D2 = MAIN DIAMETER
 - D3 = Ø123.854(0.013)
- NOMINAL CLEARANCE AT MAIN DIAMETER D2 = 0.1
- PERMISSIBLE TO REMOVE MATERIAL TO 46 FOR WEIGHT CONTROL. $tol = 0.64(13.2 \text{ TOTAL VARIATION FOR WEIGHT CONTROL})$
- THIS DIM CAN VARY ACCORDING TO WEIGHT CONTROL DIMENSION REF NOTE 4.
- TYPICAL ALL TRAYS.

FEDERAL MOGUL SPECIAL CHARACTERISTICS		
CONTROL CHARACTERISTIC		
SAFETY CHARACTERISTIC		
SPECIFICATION	MAKER	FEDERAL MOGUL
FIRST ARTICLE INSPECTION	N/A	MS-9254
MATERIAL	N/A	MS-9254
WASHING	N/A	PM-1-0071
MACHINE OPERATION	N/A	MGP-0025
IDENTIFICATION AND TRACEABILITY	N/A	TSE-015-001 US
SURFACE FINISH	N/A	ISO 1302
CLEANLINESS	31005 TR-A	N/A
PACKAGING AND PRESERVATION OF PARTS	N/A	MGP-0025
PROFILE & QUALITY TOLERANCING	N/A	QUALITY PM-1-0099 (PROFILE MW-1-0091)
GEOMETRIC DIMENSIONING AND TOLERANCING	N/A	ADME Y14.2M-1994

NOTES:

- ALL GEOMETRIC DIMENSIONING AND TOLERANCING IS PER SUPPLIER SPECIFICATION.
- LEVEL "A" CLEANLINESS APPLIES TO ALL FINISHED SURFACES. TOTAL SURFACE AREA OF SKIRT = 0.080m²
- SUPPLIER: FEDERAL MOGUL SUPPLIER P/N: P563A501 REV. LEVEL: 01 ORIGINAL SUPPLIER DRAWING RESIDES WITH K. D. GOSWAMI, SR. STAFF ENGR., ENGINE ENGINEERING.
- FOR CASTING DIMENSIONS SEE 240GCS908M REV. H SHEET 2.

THIS DRAWING CONTAINS SUPPLIER PROPRIETARY INFORMATION AND IS NOT FOR GENERAL DISTRIBUTION.

NO CAD MODEL GENERATED

IDENTIFY KEY CONTROL CHARACTERISTIC IDENTIFIED IN THIS VIEW OR WORK 3D FINISH PROCESS CONTROLS AND DIRECTION APPLICATION ARE INDICATED APPLIED TO THIS DRAWING BY: WJW

7/28/95 TEST ENGINE			
THE INFORMATION CONTAINED HEREON IS CONFIDENTIAL INFORMATION AND THE SOLE PROPERTY OF MACK TRUCKS, INC. NO PART OF THIS DOCUMENT OR INFORMATION CONTAINED HEREIN IS TO BE REPRODUCED OR TRANSMITTED IN ANY FORM OR BY ANY MEANS WITHOUT WRITTEN PERMISSION OF MACK TRUCKS, INC. IS FORBIDDEN.			
MACK TRUCKS, INC. 20000 MACK CENTER DRIVE, LANSING, MI 48205-3000			
UNLESS OTHERWISE SPECIFIED			
MATERIAL	350	FINISHES TO	FRIC TCO
UNIT	MM	UNIT	MM
SCALE	1:1	SCALE	1:1
ENGR.	C.D. GOSWAMI	DATE	07/29/95
CHKD.	J.W. NOLL	DATE	07/29/95
DRAWN	J.W. NOLL	DATE	07/29/95
DATE	3/25/99	SCALE	NONE
		SHEET	1 OF 1

PREVIOUS CHANGES

TITLE: PISTON (SKIRT)

NO. 240GCS119M

FORM NO. 109-10-1