

# A1 INSTALLATION DRAWING

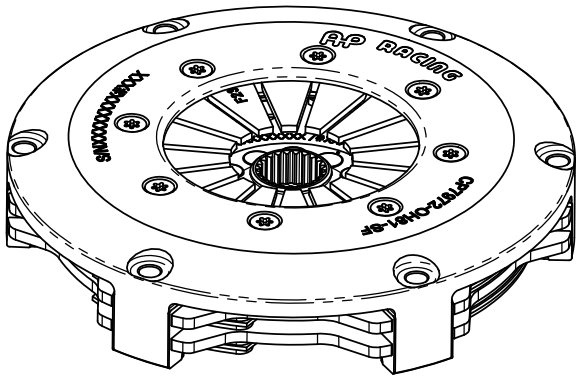
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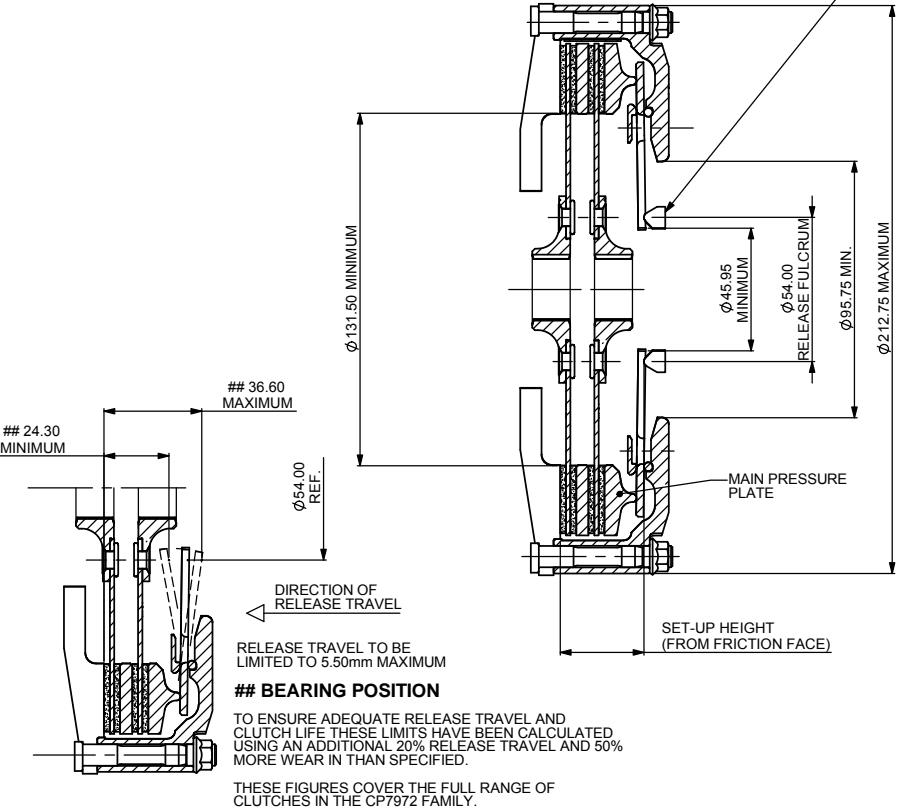
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## CP7972, Ø184mm (7.25") CERAMETALLIC CLUTCH ASSEMBLY



**RECOMMENDED RELEASE BEARING :-**  
 STEEL CAGED, ROUND NOSED BALL TYPE BEARING TO BE FREE OF SPRING FINGERS WHEN CLUTCH IS FULLY ENGAGED.  
 CP3457-2 STANDARD RELEASE BEARING (OUTER RACE ROTATES)  
 CP3457-6 HIGH SPEED RELEASE BEARING (INNER RACE ROTATES).



## CP7972 CLUTCH FAMILY

MAXIMUM DYNAMIC TORQUE CAPACITY						
(Nm)	636	421	263	636	827	519
(ft.lb)	469	310	194	469	610	383
<b>RELEASE LOAD</b>						
Max. Peak New (N)	3500	2400	1600	4000	3500	2400
Max. Peak Worn (N)	4400	3300	2200	5100	4400	3300
<b>WEAR IN (See Note)</b>						
	0.75	0.75	0.75	1.25	0.75	0.75
<b>Set Up Height New</b>						
	33.49	34.12	33.29	32.65	33.84	34.60
	30.95	31.57	30.93	30.13	30.88	31.62
<b>Set Up Height Worn - MAX</b>						
	36.08	36.72	35.81	36.92	39.52	37.68
(Set Up Height is calculated from the flywheel friction face.)						
<b>Release Ratio</b>						
	3.31	3.31	3.31	3.31	3.96	3.96
Estimated Assembly Mass (Inc. 4 paddle driven plate) = 3.55 Kg						
Estimated Assembly Inertia (Inc. 4 paddle driven plate) = 0.02009 Kgm <sup>2</sup>						
Estimated Driven Plate Inertia ( 4 paddle driven plate ) = 0.003567 Kgm <sup>2</sup>						

PERFORMANCE SUFFIX	CH	OH	NH	TH	CE	OE
For Reference						
Diaphragm Spring Rate	CRV	ORA	GRN	TGY	CRV	ORA
Clutch Ratio	HiR	HiR	HiR	HiR	EHR	EHR

MATERIAL SUFFIX	DRIVE PLATE MATERIAL	DRIVE PLATE THICKNESS
<b>81</b>	CERAMETALLIC	6.00mm

FLYWHEEL TYPE		
	SUFFIX	COMMENTS
FLAT FLYWHEEL	<b>FF</b>	FOR INSTALLATION DATA SEE SHEET 2
STEPPED FLYWHEEL	<b>SF</b>	FOR INSTALLATION DATA SEE SHEET 2

Sample AP Racing Part No. **CP7972-CH81-SF**

WEAR IN
THIS CLUTCH HAS BEEN DESIGNED FOR THE WEAR IN INDICATED ABOVE,
DRIVEN PLATE THICKNESS NEW: 6.00mm Nominal
DRIVEN PLATE THICKNESS WORN : 5.63mm Minimum Worn
FOR DRIVEN PLATE DETAILS SEE SHEET 3

Issue No	Alterations		Zone	Initials
	Date & No.	Particulars		
FOR ALL ISSUE RECORDS PRE '05 SEE ARCHIVE COPY				
8	23/10/06 C2999	TE option added.	#	JG
9	01/11/06 C2999	6 PADDLE DRIVEN PLATE PART NUMBERS ADDED.	#	JG
10	05/04/07 C3112	NESTED TYPE DRIVEN PLATES ADDED TO SHEET 3	#	JG
11	22/08/07 C3206	CP8401-G036H WAS CP8401-G036H CP8401-G036H WAS CP8401-G036H	#	JG
12	18/01/10 C3716	CP2567-51 AND -52 ADDED SEE SHEET 3.	#	JG
13	19/01/10 C3791	'CE' AND 'OE' SPECS ADDED. ASSEMBLY ETCHING UPDATED PICTORIALY.	#	JG
14	01/02/10 C3789	SH ASSEMBLY TORQUE 636(468) WAS 589(441) RELEASE LOAD 3500/4400 WAS 3200/4200 OH ASSEMBLY TORQUE 421(310) WAS 400(295) RELEASE LOAD 2400/3300 WAS 2000/3200 NH ASSEMBLY TORQUE 827(610) WAS 267(197) RELEASE LOAD 1600/2200 WAS 1650/2100 TH ASSEMBLY TORQUE 636(468) WAS 589(441) RELEASE LOAD 3500/4400 WAS 3200/4200 CE ASSEMBLY TORQUE 827(610) WAS 840(619) RELEASE LOAD 3500/4400 WAS 3200/4200 WEAR-IN 0.75 WAS 0.50 OE ASSEMBLY TORQUE 819(383) WAS 555(409) RELEASE LOAD 2400/3300 WAS 2000/3200 WEAR-IN 0.75 WAS 0.50	#	JG
15	10/06/10	WEIGHT AND INERTIA CORRECTION	#	JG
16	25/05/11 C3716	CP8172-10FM4 WAS CP2567-51FM4 CP8172-11FM4 WAS CP2567-52FM4	#	JG
17	18/04/12 C4293	DRIVEN PLATE OPTIONS CP8401-A026H AND CP8401-G026H ADDED.	#	JG
18	18/09/12 C4330	CUSHION PRESSURE PLATE DETAILS REMOVED FROM SHEETS 1 AND 2	#	JG
19	29/09/17 C5191	CH ASSEMBLY SUH NEW: 33.49/30.95 WAS 32.27/30.52 SUH WORN: 36.08 WAS 34.78 OH ASSEMBLY SUH NEW: 34.72/31.57 WAS 32.80/30.91 SUH WORN: 36.72 WAS 35.31 NH ASSEMBLY SUH NEW: 33.29/30.93 WAS 32.39/30.53 SUH WORN: 35.81 WAS 34.90 TH ASSEMBLY SUH NEW: 32.65/30.13 WAS 32.47/30.72 SUH WORN: 36.92 WAS 34.98 WEAR IN 1.25mm WAS 1.50mm CE ASSEMBLY SUH NEW: 33.84/30.88 WAS 33.11/30.16 SUH WORN: 35.92 WAS 35.19 OE ASSEMBLY SUH NEW: 34.60/31.62 WAS 33.75/30.78 SUH WORN: 37.68 WAS 35.83	#	GS

SCALE 1:1 SHEET 1 OF 3

DRAWN: Jeremy Govan

APPROVED:

DERIVED FROM: cp7861 / cp7382

TITLE: Ø184mm (7.25") TWIN PLATE CLUTCH INSTALLATION

DRG NO. cp7972cd

# A1 INSTALLATION DRAWING

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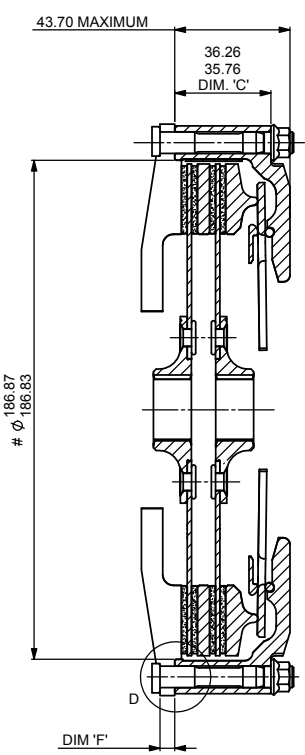
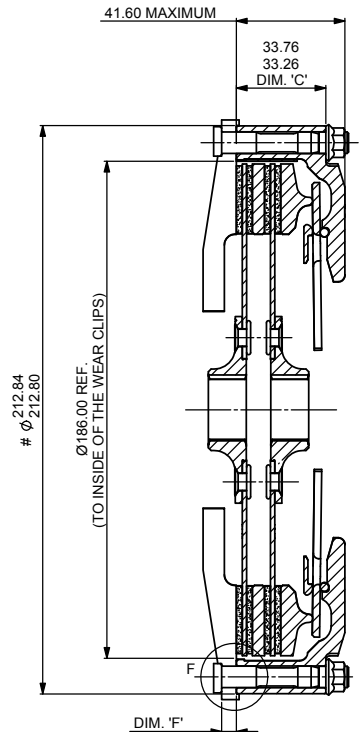
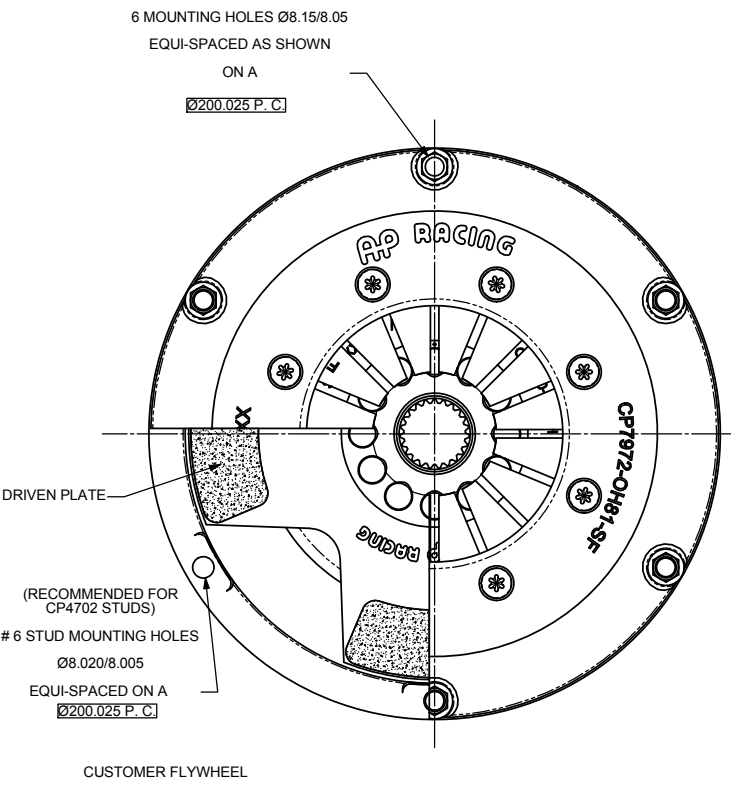
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## FLYWHEEL DIMENSIONS

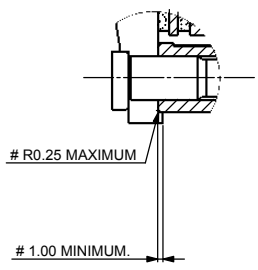
### FLAT FLYWHEEL - SUFFIX -FF

# FLYWHEEL DIMENSIONS

### STEPPED FLYWHEEL SUFFIX -SF



DETAIL F SCALE 2 : 1



RECOMMENDED CLUTCH MOUNTING :

(FOR ALL TYPES OF ASSEMBLY)  
 M8 x 1.0, CP4702 FAMILY STUD AND  
 K-LOCK NUT.  
 TIGHTENING TORQUE : 19Nm (14 ft.lb)

LENGTH OF STUD REQUIRED TO BE  
 CALCULATED THUS :

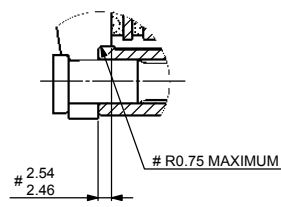
STUD LENGTH =  
 DIMENSIONS 'C' + 'F' + NUT

THIS CALCULATED LENGTH TO BE ROUNDED  
 UP TO THE NEXT AVAILABLE STANDARD STUD  
 LENGTH.

SUGGESTED FLYWHEEL MATERIAL:

0.35/0.45% CARBON STEEL, BRINELL 200 MIN. OR  
 SUITABLE MATERIAL FOR HIGH RPM.  
 FRICTION FACE TO BE FINE TURNED AND GROUND  
 SMOOTH AND FLAT. RUN OUT AT R77.2, ±0.08  
 WHEN ASSEMBLED TO CRANKSHAFT.

DETAIL D SCALE 2 : 1



Issue No.	Alterations		Zone	Initials
	Date & No.	Particulars		
		FOR ALL ISSUE RECORDS PRE-SEE ARCHIVE COPY		05
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9	01/11/06 C2999	6 PADDLE DRIVEN PLATE PART NUMBERS ADDED.	#	JG
10	05/04/07 C3112	NESTED TYPE DRIVEN PLATES ADDED TO SHEET 3	#	JG
11	22/08/07 C3206	CP8401-G036H WAS CP8401-G03E CP8401-G036H WAS CP8401-G036	#	JG
12	18/01/10 C3716	CP2567-51 AND -52 ADDED SEE SHEET 3.	#	JG
13	19/01/10 C3791	CE AND OE SPECS ADDED. ASSEMBLY ETCHING UPDATED PICTORIALY.	#	JG
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17	18/04/12 C4293	DRIVEN PLATE OPTIONS CP8401-A026H AND CP8401-G026H ADDED.	#	JG
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SCALE 1:1 SHEET 2 OF 3

DRAWN: Jeremy Govan

APPROVED:

DERIVED FROM: cp7861 / cp7382

TITLE  
 Ø184mm (7.25") TWIN PLATE  
 CLUTCH INSTALLATION

DRG NO. cp7972cd

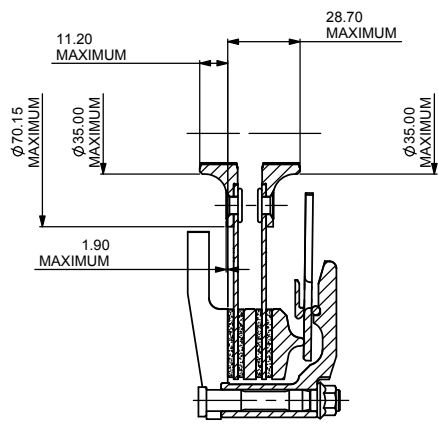
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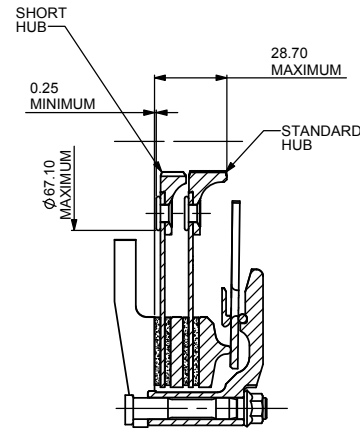


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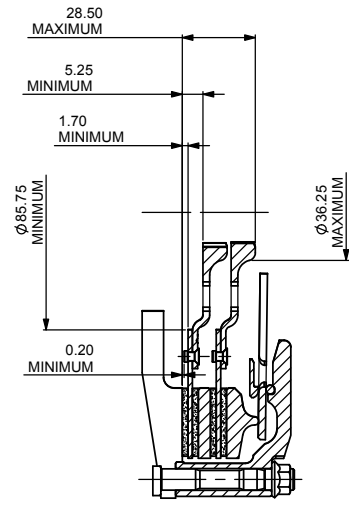
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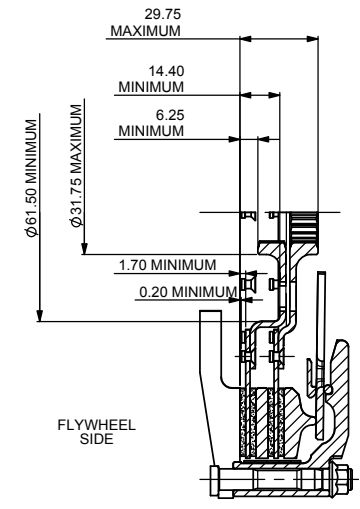
BACK TO BACK DRIVEN PLATES (CP8401 AND CP8601 TYPE)



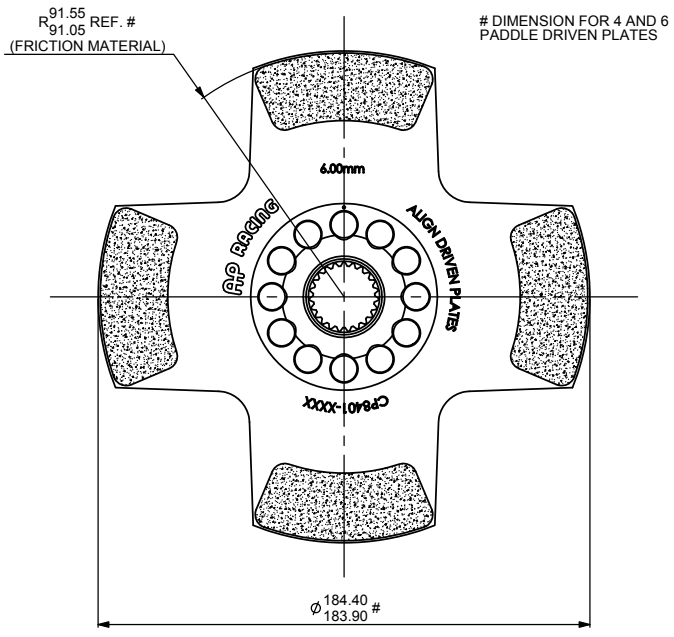
REDUCED OFFSET DRIVEN PLATES (CP8401 AND CP8601 TYPE)



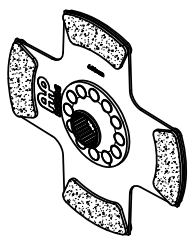
NESTED TYPE DRIVEN PLATES (CP7972 TYPE)



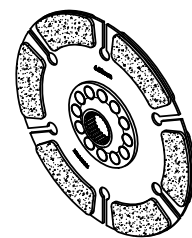
ALTERNATIVE NESTED TYPE DRIVEN PLATE (CP8172 TYPE)



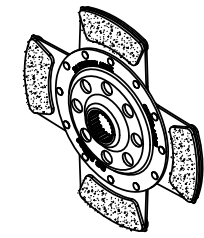
# DIMENSION FOR 4 AND 6 PADDLE DRIVEN PLATES



4 PADDLE DRIVEN PLATES (1:2 SCALE)



6 PADDLE DRIVEN PLATES (1:2 SCALE)



4 PADDLE NESTED TYPE DRIVEN PLATES (1:2 SCALE)

DRIVEN PLATE DETAILS									
BACK TO BACK TYPE			REDUCED OFFSET TYPE				NESTED TYPE		
PART NUMBER	NUMBER REQUIRED	SPLINE	PART NUMBER	NUMBER REQUIRED	SPLINE	PART NUMBER	NUMBER REQUIRED	SPLINE	
CP8401-A036H	2	1.00" x 23T	CP8401-A036H	1	1.00" x 23T	CP7972-A036H	2	1.00" x 23T	
			CP8401-G036H	1	1.00" x 23T				
CP8401-A026H	2	7/8" x 20T	CP8401-A026H	1	7/8" x 20T				
			CP8401-G026H	1	7/8" x 20T				
CP8401-A008	2	29 x 10T							
6 PADDLE							ALTERNATIVE NESTED TYPE		
CP8601-A036H	2	1.00" x 23T	CP8601-A036H	1	1.00" x 23T	CP8172-10FM4	1	1.00" x 23T	FLYWHEEL SIDE
			CP8601-G036H	1	1.00" x 23T	CP8172-11FM4	1	1.00" x 23T	COVER SIDE

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9	01/11/06	S PADDLE DRIVEN PLATE PART NUMBERS ADDED.		#	JG
10	05/04/07	C3112		#	JG
11	22/08/07	C3206		#	JG
12	18/01/10	C3716	CP2967-51 AND -52 ADDED	#	JG
13	19/01/10	C3791	'CE' AND 'OE' SPEC'S ADDED. ASSEMBLY ETCHING UPDATED PICTORIALY.	#	JG
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SCALE 1:1 SHEET 3 OF 3  
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 APPROVED:  
 DERIVED FROM: cp7861 / cp7382  
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