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ENGINE DRIVE		ENGINE STUD DATA		SPLINE PD	SPEED	TORQUE LB IN.			ALLOWABLE ACCESSORY WT ON ENGINE DRIVE	ALLOWABLE OVERHUNG MOMENT ON ENGINE DRIVE	GASKET
DRAWING NO.	TYPE NO.	NO.	BC		RPM	T_c	T_o	T_s			
AND20000	X-A	4	2.653	.600	3250 - 3750	100		800	6	25	AN4045-1
AND20000	X-B				3550 - 3750						
AND20001	XI-B		5.000		3250 - 3750	250	375	1650	25	125	AN4044-1
AND20001	XI-C				3550 - 3750	500	750	2200	30	150	
AND20002	XII-A	6		.800	7500 - 8250				65	400	AN4047-1
AND20002	XII-B			1.200		1000	1500	4400			
AND20002	XII-C					1500	2250	6600			
AND20002	XII-D			.800	(a) 6000	500	750	2200		500	
AND20002	XII-E			1.200		1000	1500	4400	75	625	
AND20002	XII-F					1500	2250	6600			
AND20002	XII-J			.800		600	900	2700	40	350	
AND20002	XII-K			1.200	3250 - 3750	1000	1500	4400	50	400	
AND20002	XII-M				7500 - 8250	2500	3750	11000	65		
AND20002	XII-N				(a) 6000						
AND20002	XII-S				3300 ±300				75	625	
AND20002	XII-T			1.625							
AND20002	XII-W			1.200	3250 - 3750	1500	2250	6600			
AND20003	XIII-A	4	2.828	.4583	2000 - 2500	25		450			AN4059-1
AND20003	XIII-B					50		600			
AND20004	XIV-A	6	5.000	JAW	1:1 RATIO				(3) 27	300	AN4047-1
AND20004	XIV-B				3:1 RATIO						
AND20004	XIV-C		5.750		1:1 RATIO				(3) 28	350	AN4058-1
AND20004	XIV-D										
(3) AND20004	XIV-E		5.000						27	300	AN4047-1
AND20005	XV-A	4	2.653	SQUARE	1/2 CSHAFT	7		50			AN4045-1
AND20005	XV-B				4200 ±25						
AND20006	XVI-A	12	10.000	1.200	7500 - 8250	1500	2250	6600	150	1250	AN4144-1
AND20006	XVI-B				(a) 6000						
AND20006	XVI-C				7500 - 8250	2500	3750	11000	225	2500	
AND20006	XVI-D				(a) 6000						
AND20006	XVI-S				3300 ±300				125	1000	
AND20006	XVI-T			1.625							
AND20007	XVII-A	6	5.000		7500 - 8250	4200	6300	18500	65	400	AN4047-1
AND20007	XVII-B				(a) 6000				75	625	
AND20007	XVII-C	12	10.000		7500 - 8250				150	1250	AN4144-1
AND20007	XVII-D								225	2500	
AND20007	XVII-E				(a) 6000				150	1250	
AND20007	XVII-F								225	2500	
AND20008	XVIII-A	4	2.750	FLANGE	7500 - 8250	1500	2250	6600			
AND20008	XVIII-B				(a) 6000						
AND20008	XVIII-C		3.000		7500 - 8250	2500	3750	11000			
AND20008	XVIII-D				(a) 6000						
AND20009	XIX-A	6	4.000	JAW	1:1 RATIO				19	80	AN4119-1
AND20009	XIX-B										
AND20010	XX-A				2400 - 2700	125	188	825			MS100009

(a) DRIVE SPEED OF 6,000 +400 -000 RPM WHEN OPERATING AT 75 PERCENT NORMAL SEA LEVEL STATIC OUTPUT.

ACCESSORY FLANGES MAY BE MOUNTED ON ENGINE DRIVES WHICH HAVE HIGHER RATINGS BUT ARE OF THE SAME NOMINAL USE.

WHEN DRIVES CHOSEN FROM THIS DRAWING ARE USED FOR MOUNTING ENGINE COMPONENTS, THE WORD "COMPONENT" SHALL BE ADDED IN LIEU OF THE SUFFIX LETTER AFTER THE TYPE DESIGNATION (EXAMPLE: TYPE XII-COMPONENT).

STATIC TORQUE REQUIREMENTS APPLY TO EACH DRIVE INDEPENDENTLY, A GEAR TRAIN NEED BE ONLY OF SUFFICIENT STRENGTH TO ACCOMMODATE ANY ONE STATIC TORQUE AT ANY GIVEN TIME.

OVERHUNG MOMENTS SPECIFIED ARE STATIC AND THE DRIVE SHALL BE OF SUFFICIENT STRENGTH TO SUPPORT THOSE WEIGHTS AND OVERHUNG MOMENTS.

APPROVED 30 Apr 47 REVISED (1) 31 Oct 49 (2) 15 May 53 (3) 23 Nov 54

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FTI: This drawing was approved by joint action of the Air Force and Navy Departments as the Air Force-Navy standard for this product. This drawing supersedes all associated standard drawings for the same product and shall become effective for the procurement of commercial supplies, or for use in new designs, not later than 6 months after the latest date of approval shown.

AIR FORCE-NAVY AERONAUTICAL DESIGN STANDARD

REFERENCE CHART, AIRCRAFT ENGINE ACCESSORY DRIVES

AND10230

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ENGINE DRIVE		ACCESSORY FLANGE		ACCESSORY NOMINAL USE OF ENGINE DRIVE	INSTALLATION CLEARANCE	TYPE OF ENGINE FOR WHICH ENGINE DRIVE IS APPLICABLE	REMARKS
DRAWING NO.	TYPE NO.	DRAWING NO.	TYPE NO.				
AND20000	X-A	AND10260	X	LOW SPEED FLUID POWER PUMP	(b)	ALL	
AND20000	X-B						
AND20001	XI-B	AND10261	XI-B	FLUID POWER PUMP			FLANGE ADAPTER AN4055-1A CONVERTS TYPE XI TO TYPE X
				PROPELLER CONTROL		TURBOPROP	
AND20001	XI-C		XI-C	FLUID POWER PUMP		ALL	
AND20002	XII-A	AND10262	XII-A	GENERATOR	AND10305	RECIPROCATING	SPLINE ADAPTER AN4052-1 CONVERTS 1.2 PD SPLINE TO .8 PD TYPE XII-J AND TYPE XII-K EQUIPPED WITH DOWEL HOLES AND OIL HOLES ADAPTER AN4138-1A AND AN4141-2 CONVERTS TYPE XII-J TO AND20001, TYPE XI-B DRIVE ADAPTER AN4138-1A AND AN4141-3 CONVERTS TYPES XII-K & XII-W TO AND20001, TYPE XI-B DRIVE
AND20002	XII-B		XII-B				
AND20002	XII-C		XII-C				
				POWER TAKE-OFF	(b)		
AND20002	XII-D		XII-A	GENERATOR	AND10305	TURBOJET & TURBOPROP	
AND20002	XII-E		XII-B				
AND20002	XII-F		XII-C				
				POWER TAKE-OFF	(b)		
AND20002	XII-J		XII-J	FLUID POWER PUMP		ALL	
AND20002	XII-K		XII-K				
AND20002	XII-M		XII-M	GENERATOR	AND10305	RECIPROCATING	
				POWER TAKE-OFF	(b)		
AND20002	XII-N			GENERATOR	AND10305	TURBOJET & TURBOPROP	
				POWER TAKE-OFF			
AND20002	XII-S		XII-S	STARTER			
AND20002	XII-T		XII-T				
AND20002	XII-W		XII-C	FLUID POWER PUMP		ALL	
AND20003	XIII-A	AND10263	XIII-A	FUEL PUMP		RECIPROCATING	FOR ENGINES 4,000 CU IN. OR LESS DISPLACEMENT
AND20003	XIII-B		XIII-B				FOR ENGINES OVER 4,000 CU IN. DISPLACEMENT
AND20004	XIV-A	AND10264	XIV-A	STARTER			3-TOOTH JAW
AND20004	XIV-B		XIV-B				
AND20004	XIV-C		XIV-C				
AND20004	XIV-D		XIV-D				12-TOOTH JAW
(1) AND20004	XIV-E		XIV-E				
AND20005	XV-A	AND10265	XV-A	TACHOMETER	AND10310	TURBOJET & TURBOPROP	
AND20005	XV-B		XV-B				
AND20006	XVI-A	AND10266	XVI-A	GENERATOR	AND10343	RECIPROCATING	SPLINE ADAPTER AN4052-1 CONVERTS 1.2 PD SPLINE TO .8 PD FLANGE ADAPTER AN4139-1A CONVERTS 10 IN. BC TO 5 IN. BC
				POWER TAKE-OFF	(b)		
AND20006	XVI-B			GENERATOR	AND10343	TURBOJET & TURBOPROP	
				POWER TAKE-OFF	(b)		
AND20006	XVI-C		XVI-C	GENERATOR	AND10343	RECIPROCATING	
				POWER TAKE-OFF	(b)		
AND20006	XVI-D			GENERATOR	AND10343	TURBOJET & TURBOPROP	
				POWER TAKE-OFF	(b)		
AND20006	XVI-S		XVI-S	STARTER			
AND20006	XVI-T		XVI-T				
AND20007	XVII-A	AND10267	XVII-A	GENERATOR	AND10305	RECIPROCATING	SPLINE ADAPTER AN4182-2 CONVERTS 1.625 PD TO 1.2 PD SPLINE SPLINE ADAPTER AN4182-1 CONVERTS 1.625 PD TO .8 PD SPLINE FLANGE ADAPTER AN4139-1A CONVERTS 10 IN. BC TO 5 IN. BC
				POWER TAKE-OFF	(b)		
AND20007	XVII-B			GENERATOR	AND10305	TURBOJET & TURBOPROP	
				POWER TAKE-OFF	(b)		
AND20007	XVII-C		XVII-C	GENERATOR	AND10305	RECIPROCATING	
				POWER TAKE-OFF	(b)		
AND20007	XVII-D			GENERATOR	AND10305		
				POWER TAKE-OFF	(b)		
AND20007	XVII-E			GENERATOR	AND10305	TURBOJET & TURBOPROP	
				POWER TAKE-OFF	(b)		
AND20007	XVII-F			GENERATOR	AND10305		
AND20008	XVIII-A	AND10268	XVIII-A OR XVIII-B	POWER TAKE-OFF	(b)	RECIPROCATING	TYPE XVIII-A & -C FLANGE PROVIDES FOR BOLT HOLES, TYPE XVIII-B & -D FLANGE PROVIDES FOR STUDS
AND20008	XVIII-B					TURBOJET & TURBOPROP	
AND20008	XVIII-C		XVIII-C OR XVIII-D			RECIPROCATING	
AND20008	XVIII-D					TURBOJET & TURBOPROP	
AND20009	XIX-A	AND10269	XIX-A	SMALL STARTER		RECIPROCATING	3-TOOTH JAW
AND20009	XIX-B		XIX-B				12-TOOTH JAW
AND20010	XX-A	AND10270	XX	PROPELLER GOVERNOR		TURBOPROP & RECIP	

(b) ACCESSORY CLEARANCE SHALL BE PROVIDED IN ACCORDANCE WITH ENGINE MANUFACTURER'S MODEL SPECIFICATION.

ADAPTERS MAY BE REQUIRED AS EXPLAINED IN REMARKS.

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APPROVED 15 May 53 REVISED (1) 23 Nov 54

AIR FORCE-NAVY AERONAUTICAL DESIGN STANDARD

REFERENCE CHART, AIRCRAFT ENGINE ACCESSORY DRIVES

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