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INTERNATIONAL
400 Commonwealth Drive, Warrendale, PA 15096-0001

SURFACE VEHICLE RECOMMENDED PRACTICE

SAE J1806 REV. NOV1999

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Submitted for recognition as an American National Standard

(R) Clutch Dimensions for Truck and Bus Applications

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1. ***Scope—***Although not limited to, these clutches are normally used on trucks considered as Medium-Duty (Class 6 and 7), as well as Heavy-Duty (Class 8).

1.1 **Purpose—**This SAE Recommended Practice specifies clutch dimensions to promote standardization of single-plate and two-plate pull-type clutches. This includes flat and pot type clutches sized from 350 (14) to 430 (16.9). (See Figures 1 to 6.)

2. ***References***

2.1 **Applicable Publications—**The following publications form a part of this specification to the extent specifed herein. Unless otherwise indicated, the latest issue of SAE publications shall apply.

2.1.1 SAE PUBLICATIONS—Available from SAE, 400 Commonwealth Dri ve, Warrendale, PA 15096-0001.

SAE J1479—Automotive Pull Type Clutch Terminology
SAE J1857—Flywheel Dimensions for Truck and Bus Applications

TO PLACE A DOCUMENT ORDER: (724) 776-4970 FAX: (724) 776-0790
SAE WEB ADDRESS http://www.sae.org

2.2 Related Publications—The following publications are provided for information purposes only and are not a required part of this document.

2.2.1 SAE PUBLICATIONS—Available from SAE, 400 Commonwealth Drive, Warrendale, PA 15096-0001.

SAE J373—Housing Internal Dimensions for Single and Two-Plate Spring Loaded Clutches
SAE J617—Engine Flywheel Housings
SAE J1463—Pull Type Clutch—Transmission Installation Dimensions
SAE J1731—Pilot Bearings for Truck and Bus Applications
SAE J2407—Clutch Installation and Release Linkage Requirements for Truck and Bus Applications

2.2.2 TMC PUBLICATIONS—Available from the Maintenance Council, American Trucking Associations, 2200 Mill Road, VA 22314.

TMC RP 633 (T)—Effects of Drivetrain Torsionals
TMC RP 638 (T)—Heavy Duty Clutch Maintenance Guidelines
TMC RP 639 (T)—Spec'ing Heavy Duty Clutches

3. Definitions—The following specific terms as used in this document are defined as follows:

3.1 Heavy Duty (Class 8) Trucks—A truck or tractor rated by the manufacturer and certified to the US federal government to be for operation at a gross vehicle weight or a gross combination weight of 14 969 kg (33 001 lb) and over.

3.2 Medium Duty (Class 6 and 7) Trucks—A truck or tractor rated by the manufacturer and certified to the US federal government to be for operation at a gross vehicle weight or a gross combination weight of 8846 kg (19 501 lb) to 14 969 kg (33 000 lb).

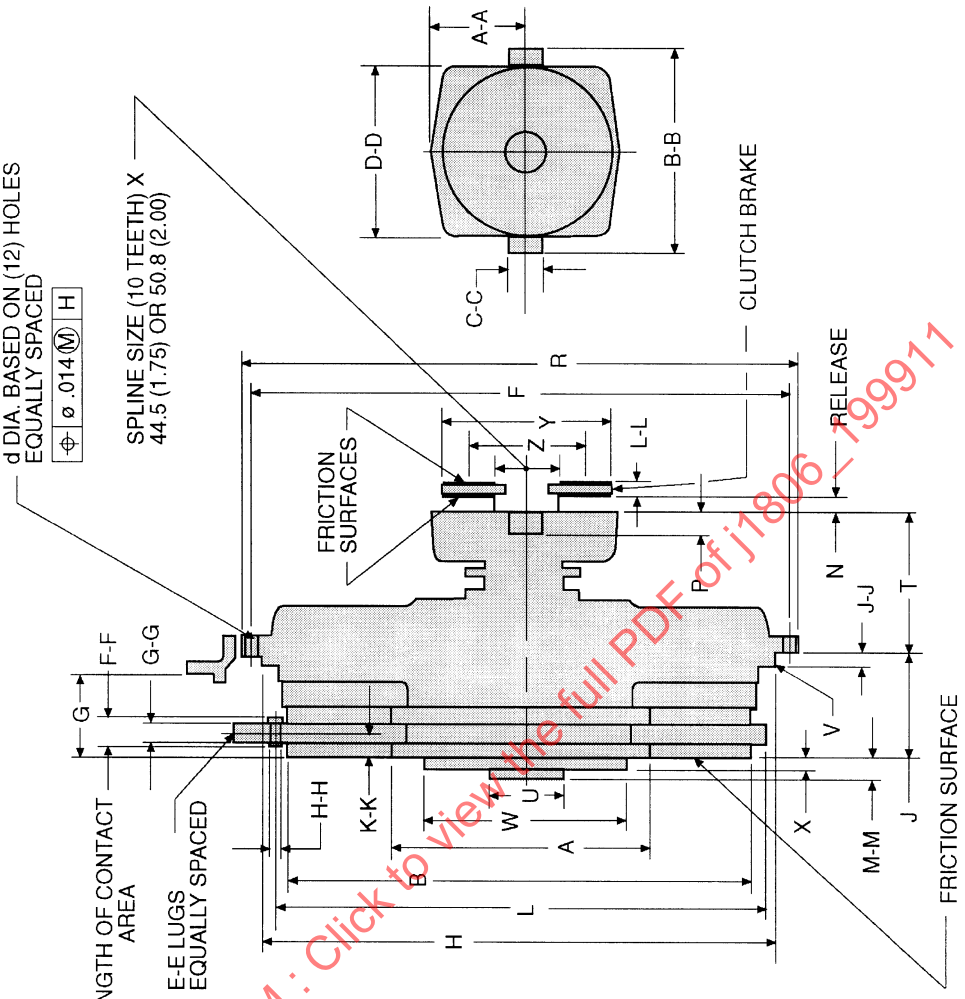
3.3 OEM—Original Equipment Manufacturer—The term used to identify a vehicle's manufacturer.

Consult SAE J1479 fo additional definitions.

4. Technical Requirements—Recommended specific clutch dimensions are shown in the figures for the following applications:

a. Figure 1, page 3 - 350 (14) 2 Plate Pull; Pot Type
b. Figure 2, page 4 - 393 (15.5) 2 Plate Pull; Flat Type
c. Figure 3, page 5 - 405 (16) Single Plate Pull; Flat Type
d. Figure 4, page 6 - 430 (17) Single Plate Pull; Flat Type
e. Figure 5, page 7 - 350 (14) Single Plate Pull; Flat Type with Clutch Brake
f. Figure 6, page 8 - 350 (14) Single Plate Pull; Flat Type Synchronized Transmission

Consult SAE J1857 for flywheel dimensions.



Dim	MM	IN	Dim.	MM	IN
A	187.5	7.38	X**	5.1	.20
B	349.3	13.75	Y	120.7	4.75
d*	10.3	.406	Z	73	2.90
F	393.7	15.50	A-A	65	2.56
G	63.5	2.50	B-B	147.4	5.81
H	374.7	14.75	C-C**	31.8	1.25
J	74.7	2.94	D-D	124	4.88
L	368.3	14.5	E-E		6
N	12.7	.50	F-F	14.5	.57
P	26.9	1.06	G-G	12.7	.50
R	412.8	16.25	H-H	10.4	.41
T	106.7	4.28	J-J**	4.1	.16
U	58.7	2.31	K-K	19.1	.75
V	.8X45°	.03X45°	L-L	10.03	.395
W	177.8	7.0	M-M**	13.2	.52

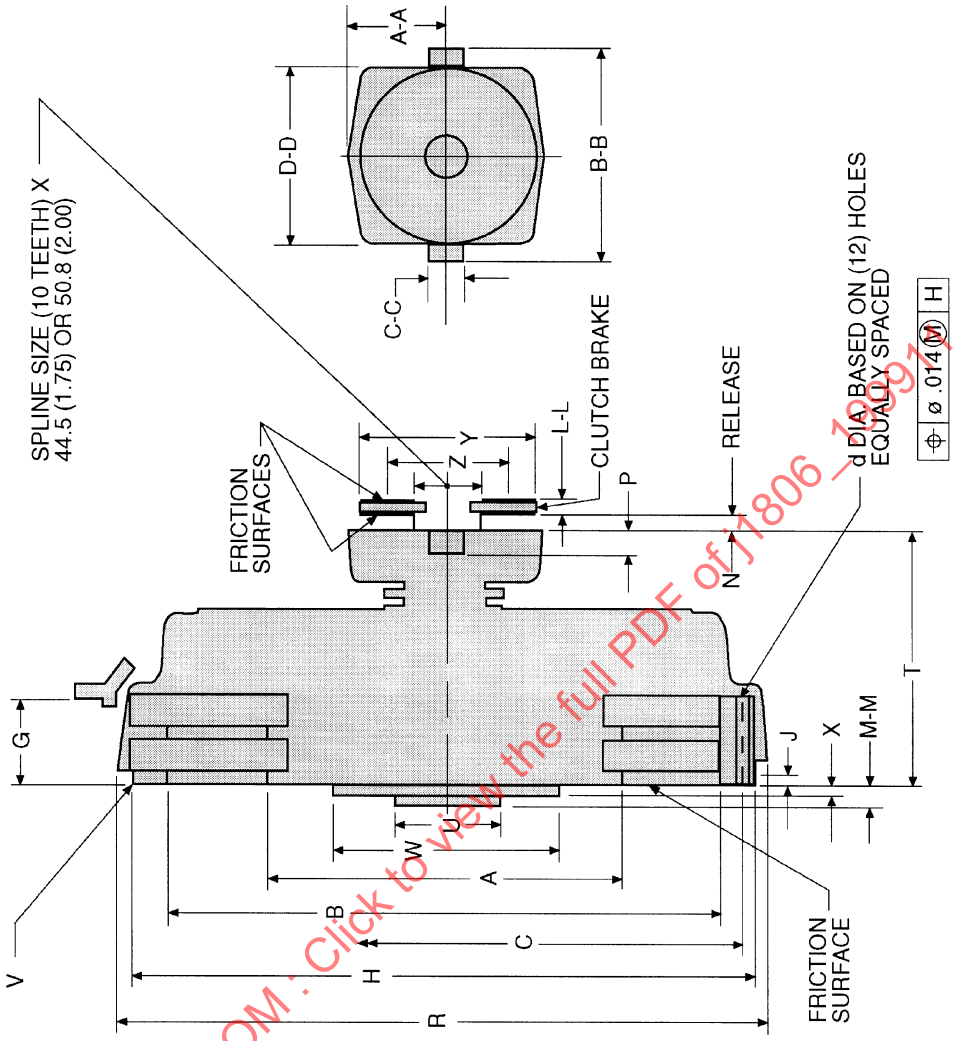
Applicable with most SAE housing size #1 and 2

Housing variations may affect fit.

* For reference only. For exact dimensions consult SAE J1857 flywheel recommended practice. Clutch dimensions should allow for proper allowance.

** Maximum

FIGURE 1—350 (14) 2 PLAT PULL; POT TYPE



Dim	MM	IN
A	225.6	8.55
B	367.4	15.25
C*	422.1	16.62
d*	11.9	.469
G	63.5	2.5
H*	435.8	17.16
J	8.13	.32
N	12.7	.5
P	26.9	1.06
R	454.2	17.88
T	183.4	7.22
U	64.8	2.55

Dim.	MM	IN
V	1X45°	.04X45°
W	218.9	8.62
X**	3.3	.13
Y	120.7	4.75
Z	73.7	2.9
A-A	65	2.56
B-B	147.6	5.81
C-C**	31.8	1.25
D-D	124	4.88
L-L	10.03	0.395
M-M**	14.6	.574

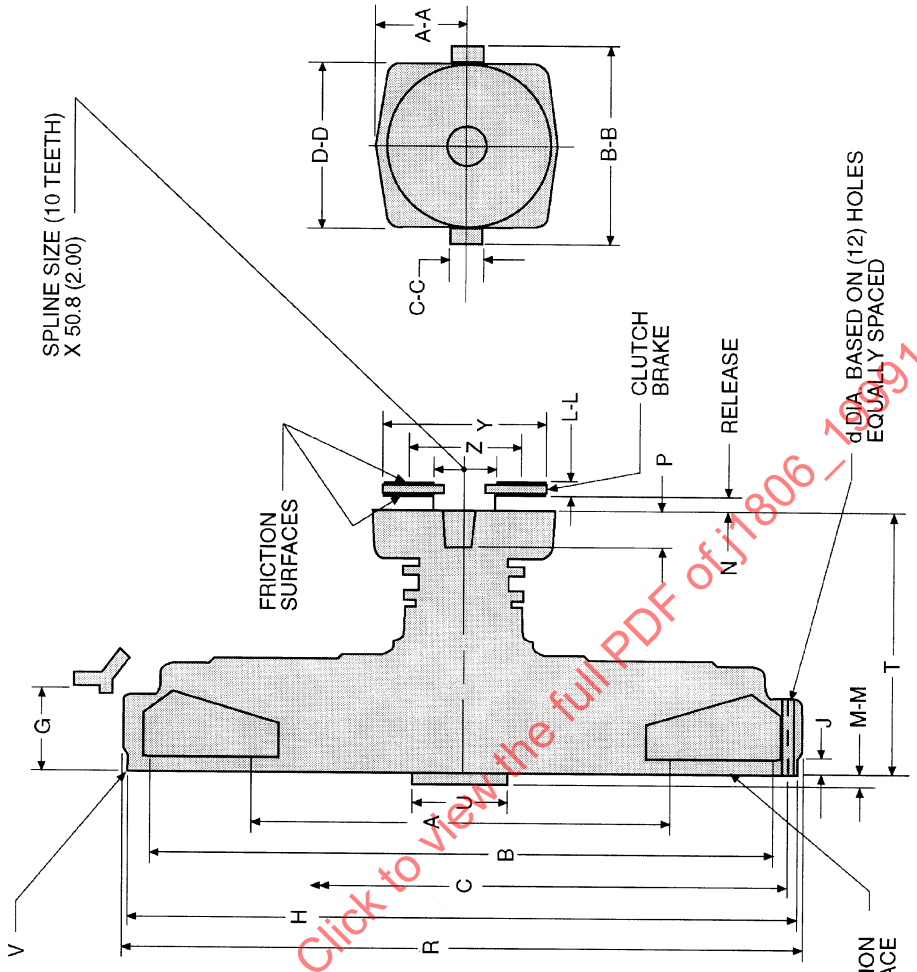
Applicable with most
SAE housing size #1 and 2

Housing variations may affect fit.

* For reference only. For exact dimensions consult SAE J1857 flywheel recommended practice. Clutch dimensions should allow for proper allowance.

** Maximum

FIGURE 2—393 (15.5) 2 PLATE PULL; FLAT TYPE



Dim	MM	IN	Dim.	MM	IN
A	235	9.25	V	2.5X30°	.098X30°
B	405	15.94	W		
C*	422.3	16.62	X**		
d*	11.5	0.45	Y	120.7	4.75
G	63.5	2.50	Z	73.7	2.90
H*	435.8	17.16	A-A	65	2.56
J	13.0	0.51	B-B	166	6.54
N	12.7	0.50	C-C**	31.8	1.25
P	26.9	1.06	D-D	124	4.88
R	448	17.64	L-L	10.03	.395
T	183.4	7.22	M-M**	5.6	.22
U	85	3.35			

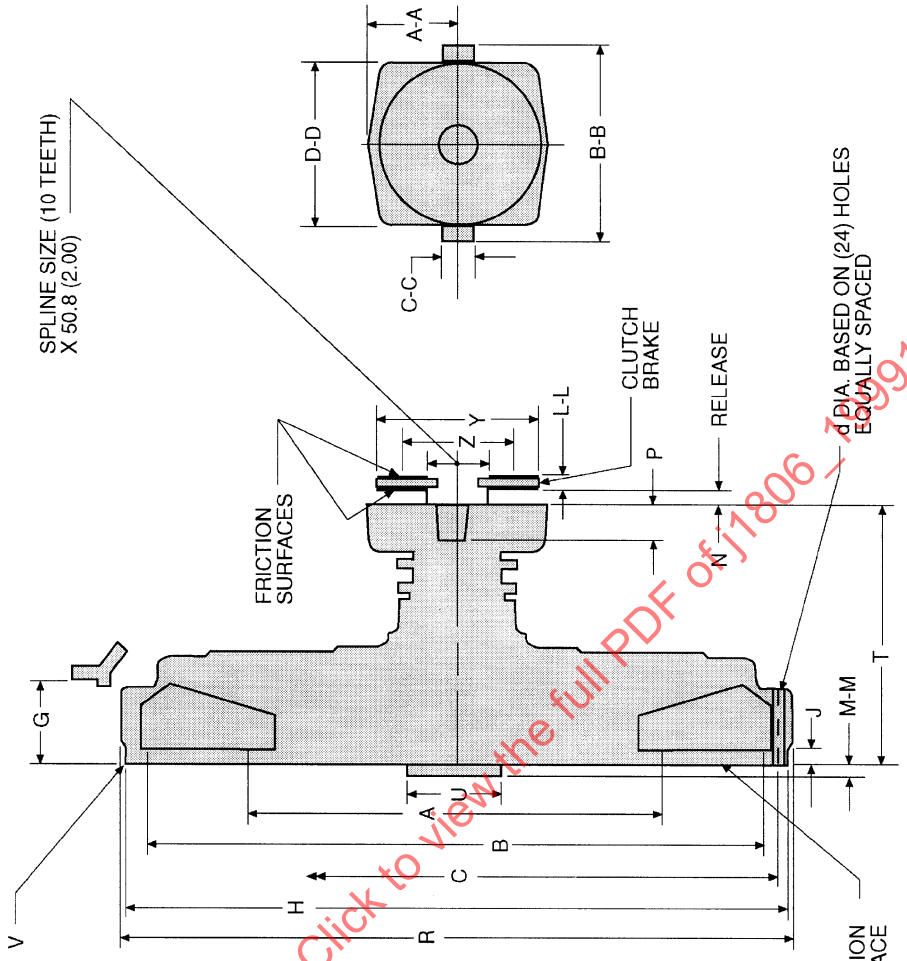
Applicable with most
SAE housing size #1 and 2

Housing variations may affect fit.

* For reference only. For exact dimensions consult SAE J1857 flywheel recommended practice. Clutch dimensions should allow for proper allowance.

** Maximum

FIGURE 3—405 (16) SINGLE PLATE PULL; FLAT TYPE



Dim	MM	IN
A	242	9.53
B	430	16.93
C*	450	17.72
d*	11	.43
G	59.9	2.36
H*	475	18.7
J	13	.51
N	12.7	.50
P	26.9	1.06
R	486	19.13
T	179.8	7.08
U	85	3.35

Dim.	MM	IN
V	1.25X45°.049X45°	
W		
X**		
Y	120.7	4.75
Z	73.7	2.90
A-A	65	2.56
B-B	166	6.54
C-C**	31.8	1.25
D-D	124	4.88
L-L	10.03	.395
M-M**	5.6	.22

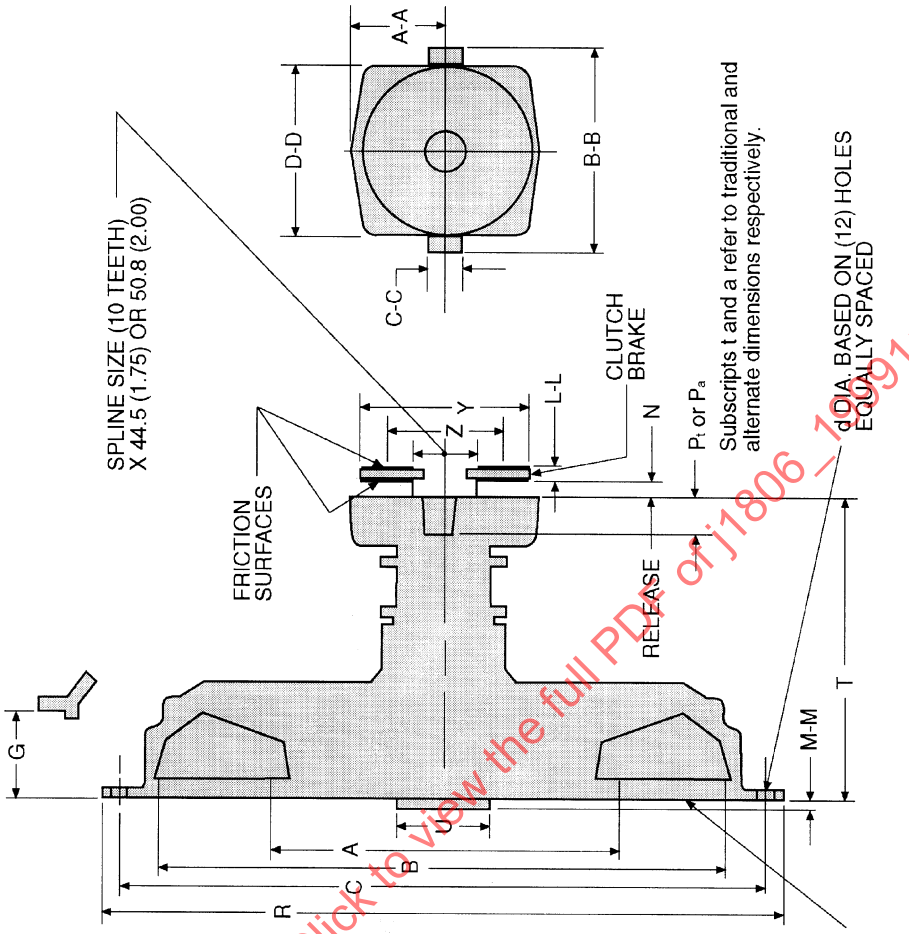
Applicable with most SAE housing size #1

Housing variations may affect fit.

* For reference only. For exact dimensions consult SAE J1857 flywheel recommended practice. Clutch dimensions should allow for proper allowance.

** Maximum

FIGURE 4—430 (17) SINGLE PLATE PULL; FLAT TYPE



Dim	MM	IN
A	187.3	7.37
B	350.8	13.81
C*	393.7	15.5
d*	9.69	.381
G	66.5	2.62
H*		
J		
N	12.7	.50
P_t	26.9	1.06
P_a	19.25	.758
R	419	16.50
T**	186.5	7.34
U	62	2.44

Dim.	MM	IN
V		
W		
X**		
Y	120.7	4.75
Z	73.7	2.90
A-A	65	2.56
B-B	166	6.54
C-C**	31.8	1.25
D-D	124	4.88
L-L	10.03	.395
M-M**	6.6	.260

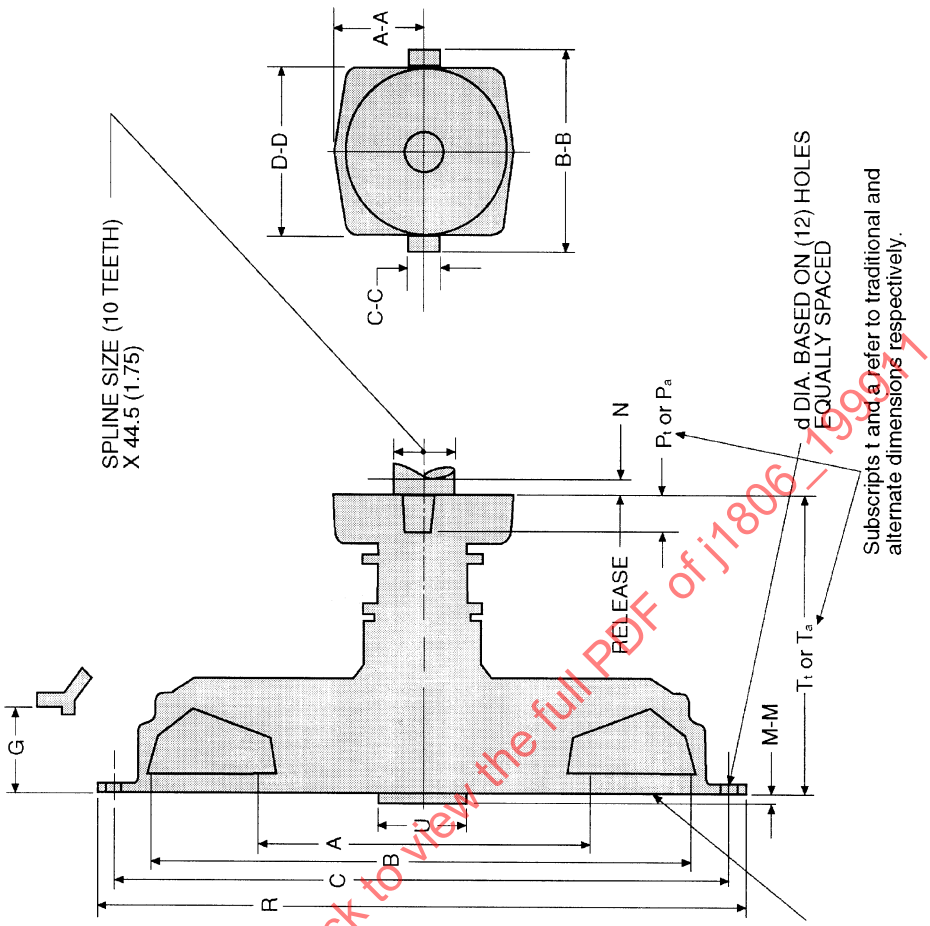
Applicable with most SAE housing size # 2

Housing variations may affect fit.

* For reference only. For exact dimensions consult SAE J1857 flywheel recommended practice. Clutch dimensions should allow for proper allowance.

** Maximum

FIGURE 5—350 (14) SINGLE PLATE PULL; FLAT TYPE WITH CLUTCH BRAKE



Dim	MM	IN	Dim.	MM	IN
A	187.3	7.37	V		
B	350.8	13.81	W		
C*	393.7	15.5	X**		
d*	9.69	.381	Y		
G	66.5	2.62	Z		
H*			A-A	65	2.56
J			B-B	166	6.54
N	12.7	.50	C-C**	31.8	1.25
P_t	26.9	1.06	D-D	124	4.88
P_a	19.25	.758	L-L		
R	419	16.50	M-M**	6.6	.260
T^{**}_t	186.5	7.34			
T^{**}_a	196.9	7.75			
U	62	2.44			

Applicable with most
SAE housing size # 2

Housing variations may affect fit.

* For reference only. For exact dimensions consult SAE J1857 flywheel recommended practice. Clutch dimensions should allow for proper allowance.

** Maximum

FIGURE 6—350 (14) SINGLE PLATE PULL; FLAT TYPE SYNCHRONIZED TRANSMISSION