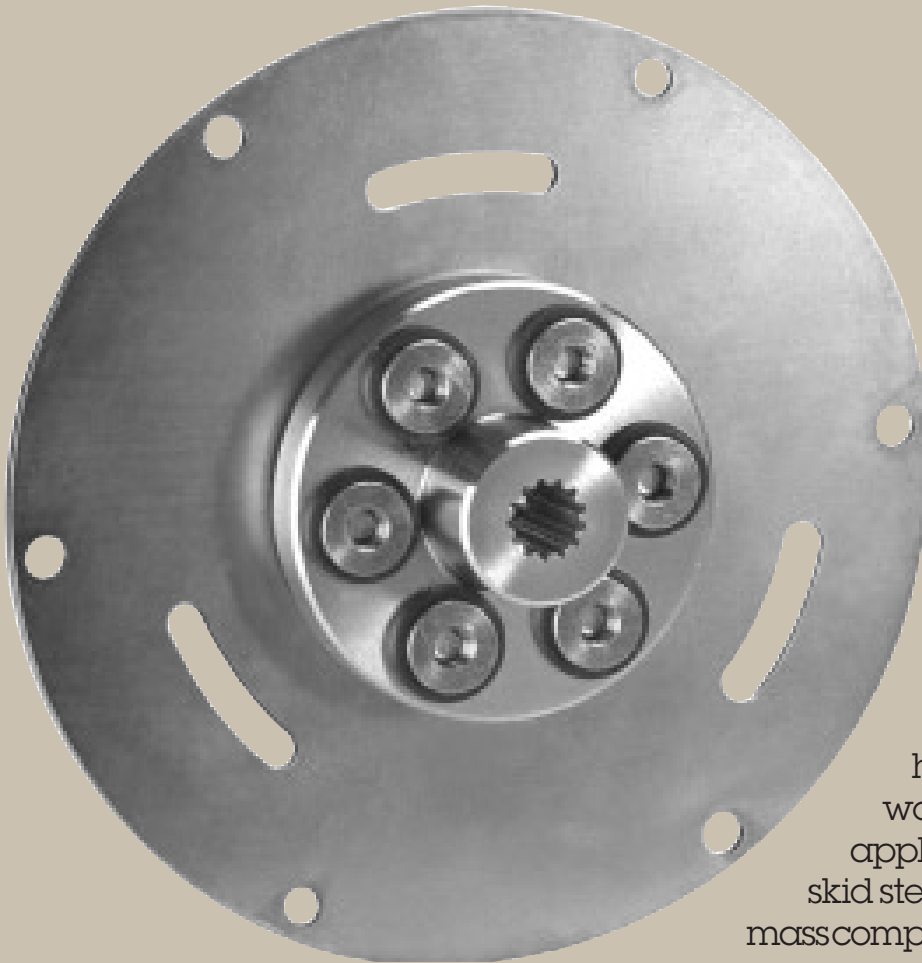


GUARDEX™

Type FBA Flywheel Coupling

MADE IN U.S.A.



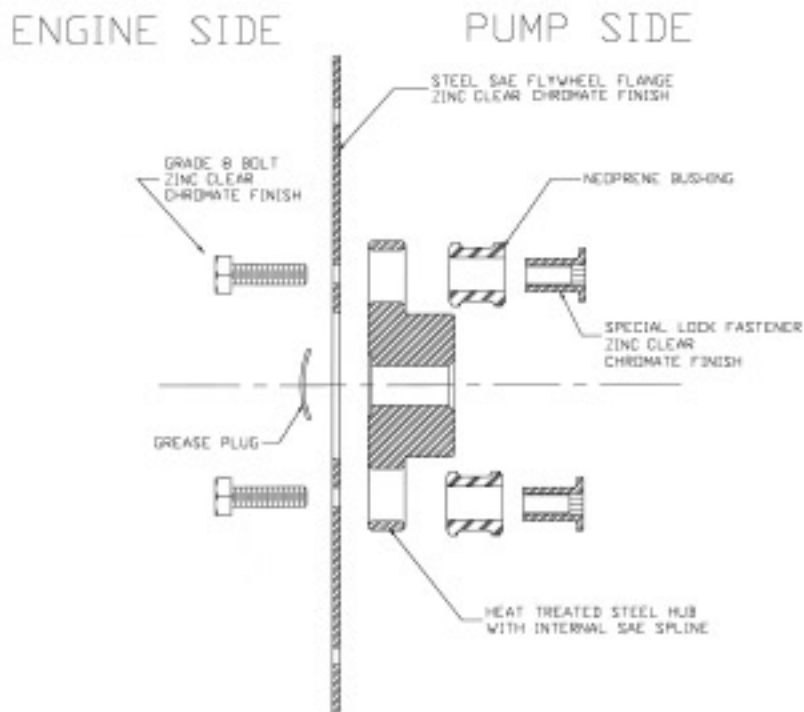
- The Guardex™ "FBA" (Flywheel-Blind Assembly) coupling is a torsionally soft hydraulic pump drive used worldwide in gas/diesel engine applications including aerial high lifts, skid steer loaders, excavators and low mass compressors.

- Flywheel flanges available in SAE 6-1/2 thru 14 inclusive, with many metric options available. Pump mounting plates and bell housings also available.
- No cross clamping required. Absorbs shock and temperatures to 212°F.





The Guardex™ FBA (flywheel-blind assembly) was designed in response to engineers that required a torsionally soft drive system with “plug in” capability. This flywheel coupling consists of a steel flywheel flange (zinc clear chromate protected), heat treated steel hub (can be splined or bored/keyed), rubber vibration dampers and specially designed fasteners (no nuts required!).



<u>COUPLING ASSEMBLY</u>	<u>NOMINAL TORQUE</u>	<u>MAX TORQUE</u>
SAE 6.5	3,450 IN#	8,625 IN#
7.5	3,450 IN#	8,625 IN#
8	7,325 IN#	18,312 IN#
10	9,204 IN#	23,210 IN#
11.5	15,000 IN#	37,500 IN#
14	15,000 IN#	37,500 IN#

MISALIGNMENT CAPABILITY

Angular = 1°
Parallel = .015

NOTE!!

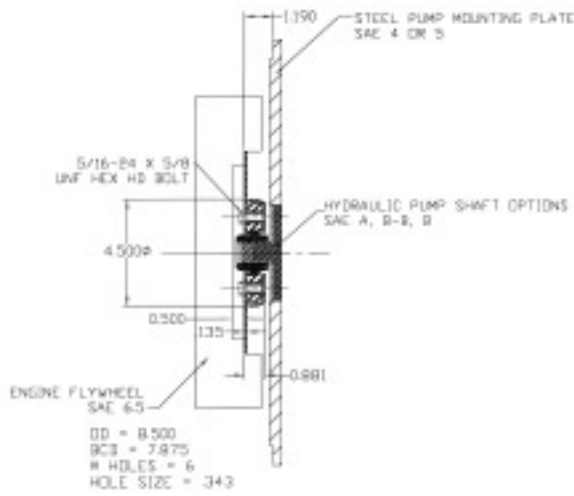
The end-user is required to use a lithium-based grease on pump spline and coupling at installation. Guardian recommends Texaco 1912 or equivalent.



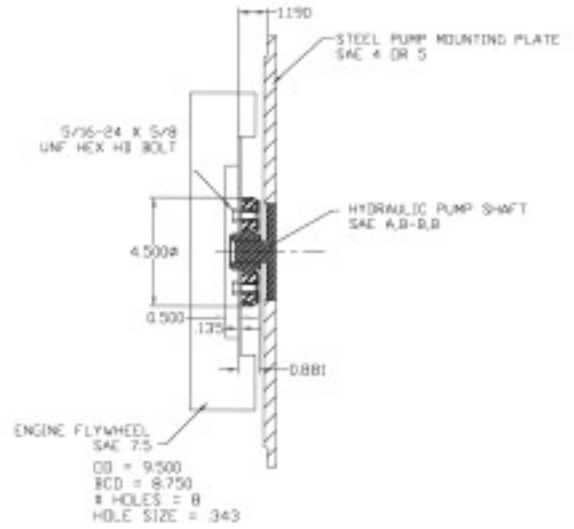
DIMENSIONAL INFORMATION



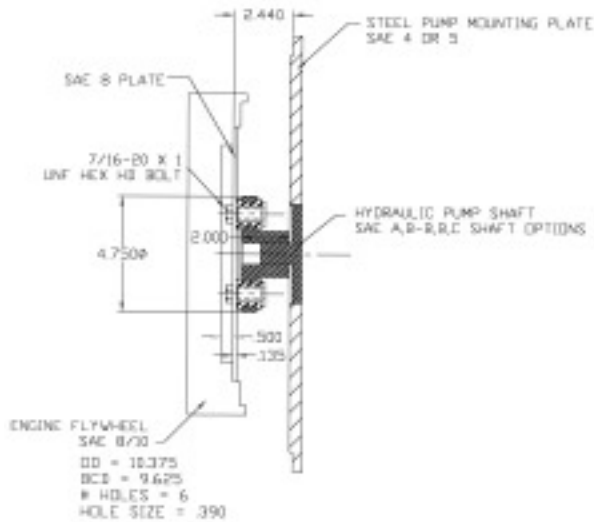
SAE 6 1/2



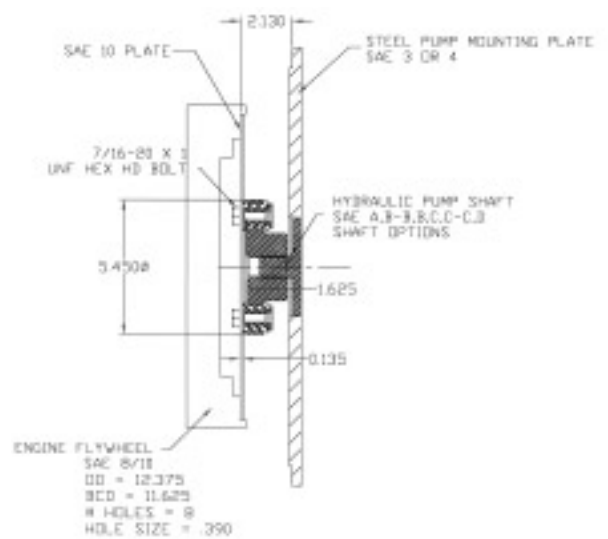
SAE 7 1/2



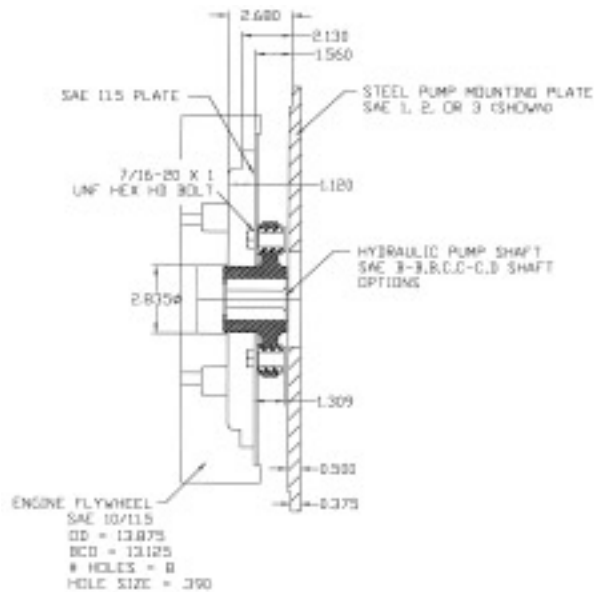
SAE 8



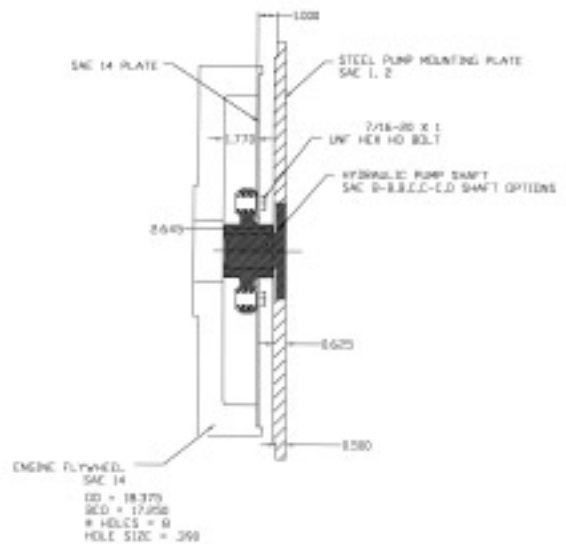
SAE 10



SAE 11 1/2



SAE 14

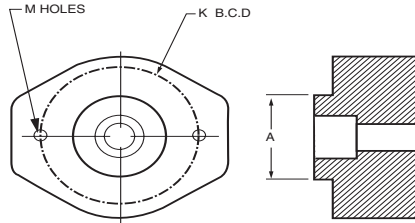




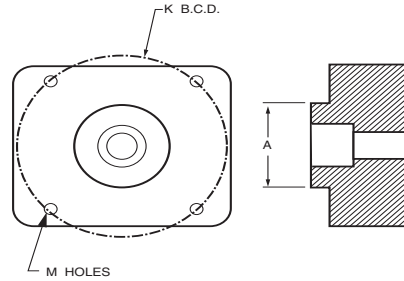
SAE PUMP / PUMP SHAFT DATA



SAE 2-BOLT MOUNTING FLANGES



SAE 4-BOLT MOUNTING FLANGES



SAE 2-BOLT MOUNTING FLANGES

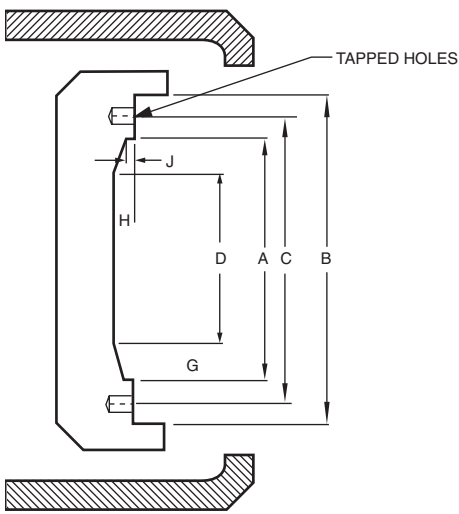
Mounting Flange		Pilot Dimensions	Flange Dimensions		Bolts
USA	SAE	A	K	M	
	AA	2.000/1.998	3.255 3.245	0.406	5/16-18
2F32	A	3.250/3.248	4.192 4.182	0.438	3/8-16
2F40	B	4.000/3.998	5.755 5.745	0.562	1/2-13
2F50	C	5.000/4.998	7.130 7.120	0.687	5/8-11
2F60	D	6.000/5.998	9.005 8.995	0.812	3/4-10
2F65	E	6.500/6.498	12.530 12.495	1.062	1-8
2F70	F	7.000/6.998	13.786 13.776	1.062	1-8

SAE 4-BOLT MOUNTING FLANGES

Mounting Flange		Pilot Dimensions	Flange Dimensions		Bolts
USA	SAE	A	K	M	
4F17	AA	1.781/1.779	2.843 2.833	0.375	5/16-18
4F32	A	3.250/3.248	4.130 4.120	0.438	3/8-16
4F40	B	4.000/3.998	5.005 4.995	0.562	1/2-13
2F50	C	5.000/4.998	6.380 6.370	0.562	1/2-13
2F60	D	6.000/5.998	9.005 8.995	0.812	3/4-10
2F65	E	6.500/6.498	12.505 12.495	0.812	3/4-10
2F70	F	7.000/6.998	13.786 13.776	1.062	1-8

SAE SPLINED PUMP SHAFTS

SAE Code	Number of Teeth	Diameter Pitch	Press Angle	Major Diameter	Minor Diameter
A	9	16/32	30 _i	.625	.509
	11	16/32	30 _i	.750	.631
B	13	16/32	30 _i	.875	.754
B-B	15	16/32	30 _i	1.000	.877
C	14	12/24	30 _i	1.250	1.087
	19	16/32	30 _i	1.260	1.130
	21	16/32	30 _i	1.380	1.250
C-C	17	12/24	30 _i	1.500	1.334
D&E	13	8/16	30 _i	1.750	1.506
F	15	8/16	30 _i	2.000	1.753

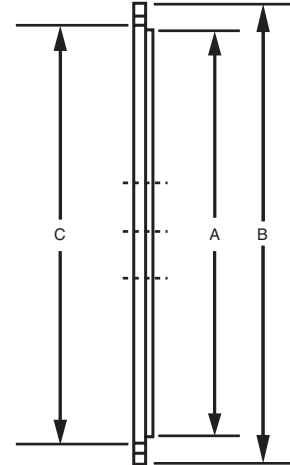


Nominal Clutch Diameter	A	B	C	D	G	H	J	Tapped Holes	
								No.	Size
6 1/2	7.25	8.500	7.875	5.00	1.19	0.50	0.38	6	5/16-18
7 1/2	8.12	9.500	8.750		1.19	0.50	0.50	8	5/16-18
8	8.88	10.375	9.625		2.44	0.50	0.50	6	3/8-16
10	10.88	12.375	11.625	7.75	2.12	0.62	0.50	8	3/8-16
11 1/2	12.38	13.875	13.125	8.00	1.56	1.12	0.88	8	3/8-16
14	16.12	18.375	17.250	8.75	1.00	1.12	0.88	8	1/2-13

GUARDEX™ STEEL PUMP MOUNTING PLATES

Housing Size	Housing Pilot A	O.D. B	B.C. C	Plate Thickness
1	20.125	21.75	20.88	.625"
2	17.625	19.25	18.38	.625"
3	16.125	17.75	16.88	.500"
4	14.250	15.88	15.00	.500"
5	12.375	14.00	13.13	.500"
6	10.500	12.12	11.25	.500"

Note: All plates have .125" deep pilot seat.



SPECIAL ALUMINUM PUMP MOUNTING CASTINGS

ENGINE	REFERENCE INFORMATION
Briggs Daihatsu	Used on engines DM700/950
Deutz F2/3/4/L1011	Used on Deutz Housing #0553, where flywheels 1771 (SAE 8) and 1772 (SAE 6-1/2) are optional.
Kubota Super Mini (B-1 Mounting)	Used on engines Z400, D600, D722, V800, WG600 and WG750. Use with Guardex™ FBA 150 mm coupling assembly.
Kubota Super 3 (B-1 Mounting)	Used on engines D1403, D1703, V1903 and V2203 KTC/Euro/U.S. Design.
Kubota Super 5 (B-1 Mounting)	Used on engines D905, D1105, V1205, V1305 and V1505. Use Guardex™ FBA-135 mm coupling assembly.
GM 3.0/4.3L	Used with GM flywheel # 93422872. Use with Guardex™ FBA SAE10 assembly.
PK 103-9-10	Used on Perkins rear end plate designs. Use with Guardex™ FBA 135 mm assembly.
PK 103-13-15	Used on Perkins rear end plate designs. Use with Guardex™ FBA-155 mm assembly.
PK 104-22	Used on Perkins rear end plate designs. Use with Guardex™ FBA-155 mm assembly.
Ford VSG413	Used on Ford backplate design. Use with Guardex™ FBA SAE 7.5 assembly.
Ford LRG425	Used on Ford backplate design. Use with Guardex™ FBA SAE 8 assembly.
Cummins B3.3	Used on Semi SAE#4 housing. Use with Guardex™ FBA SAE 10 assembly.
Yanmar 3/4TNE	Used on E-2/EB-5 backplate design. Use with Guardex™ FBA SAE 7.5 assembly.

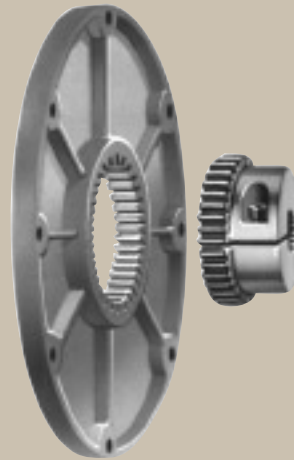
These castings are used in conjunction with Guardex™ Type FBA Flywheel couplings where short axial distances prohibit use of a flat mounting plate. These lightweight, compact and economical castings extend beyond the flywheel to offer a quick, reliable pump drive connection.

Other Guardian Products:

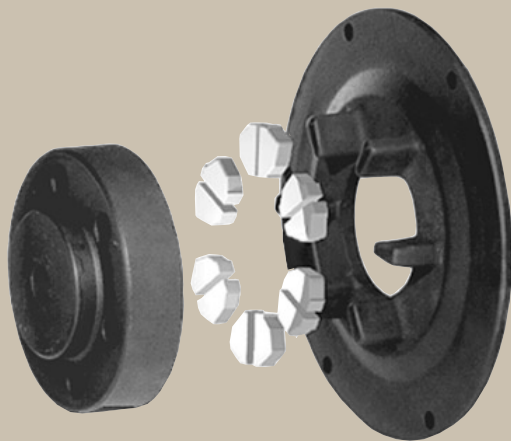
GUARDEX™

Type FL Flywheel Coupling

- Torsionally Stiff
- Reinforced Nylon Flange
- Steel Hub
- SAE Splines & Straight Bores/Keyways
- Torque Capacity to 34,300 IN#



Type FH Flywheel Coupling



- Torsionally Soft
- Cast Iron Hubs/Flanges
- Variable Durometer Elements
- Straight Shafts to 120 mmø
- Taper Lock Bushings Available
- Torque Capacity to 265,500 IN#



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