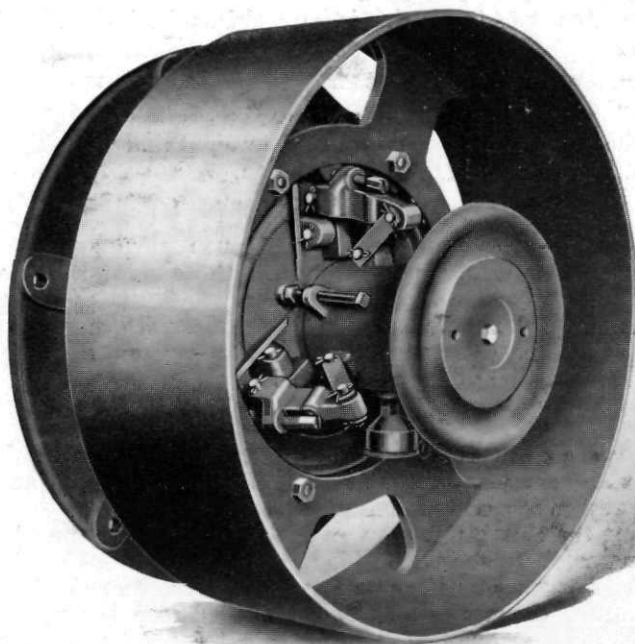

FAIRBANKS-MORSE

Type "Z"

Friction Clutch Pulleys

for "Z" and Horizontal "Y" Engines



Type "Z" Clutch Pulley for 20 H. P. "Z" and 20 and 25 H. P. "Y" Engines

BULLETIN H261A

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TYPE "Z" FRICTION CLUTCH PULLEYS

The type "Z" is an entirely self-contained line of clutch pulleys. They have but few parts, are of simple rugged construction, especially built to fit our "Z" and "Y" horizontal engines.

Setting Clutch

These clutches are set by pulling out on the hand wheels, which is the safe method, preventing accidents to the operators.

Leverage

The leverage is greatest at the time of closing, when the maximum pressure is wanted to start the load. This makes the clutch easy to operate.

Friction Rings

In the clutches used on the 3 and 6 H. P. engines and on 20 and 25 H. P. sizes the friction rings are made of a mechanically strong asbestos compound that has high friction qualities. When they become worn they can be replaced with new rings. On these rings, when the clutch is not engaged, the friction surfaces are held apart by springs. On 10 and 15 H. P. engines the friction ring is made of close grained cast iron.

On each size clutch the friction ring is gripped from both sides by machined cast iron surfaces.

Minimum Wear.

When the pulley is not in use there is no wear on friction parts. This is due to the fact that the crank shaft carries all of the weight and when the clutch is disengaged, no part of the mechanism is in motion.

Adjustments

Adjustments for wear can easily be made without removing the hand wheel or other parts. When it is necessary to adjust the clutch, the hand wheel should be pulled out to engage the clutch, after which the adjusting screws should be tightened until all screws bear against the ring with the same pressure. Then the clutch should be released and each adjusting screw set up a small amount, care being taken that all are adjusted alike.

Assembling

These clutches are easily attached to engines. No keys are required. On the 3 and 6 H. P. size three cap screws hold the spider to the flywheel and on the larger sizes six screws or bolts are required.

When applying the clutch pulley to an engine in the field, the edges of the keyway in the engine shaft should be filed smooth to prevent scoring of the clutch spider. Apply some hard grease to the crank shaft before putting on the spider; also screw down the grease cup until grease is forced into the bearing.

Pulley Rims

The clutch pulley rims are entirely independent of the clutch mechanism, being attached to the spiders with screws or studs. Various sizes of interchangeable rims may be had to meet the pulley requirements of the driven machinery.

Lubrication

Each of these pulleys is provided with a compression grease cup on the clutch sleeve. This part of the clutch should be lubricated freely.

A little grease on the friction ring of a 10 or 15 H. P. clutch is not objectionable, but the rings of the 3, 6, 20 and 25 H. P. clutch should not be lubricated.

DISTINCTIVE FEATURES AND INTERCHANGEABLE PARTS**3 and 6 H. P. Type "Z" Engine Clutch Pulleys**

The clutch mechanisms and rims (except spiders) are interchangeable. The spiders are bored for different sizes of shafts.

The following sizes of rims are standard and can be furnished on order. Dimensions show diameters and belt widths. The actual pulley faces are slightly wider.

9 x 5	12 x 5	16 x 5	20 x 5
10 x 5	14 x 5	18 x 5	

10 and 15 H. P. Engine Clutch Pulleys

This clutch pulley is regularly adaptable to either side of the 10 and 15 H. P. "Z" engines and to the opposite governor sides of the 10 and 15 H. P. "Y" engines. By the use of a special adapter which is furnished on order, any size may be used on the governor side of a 10 or a 15 H. P. "Y" engine.

Clutch rings will interchange, except that those used on clutches for "Y" engines will not interchange with those used on "Z" engines. Spiders differ in bore only. Adapters are not interchangeable on these two sizes of "Y" engines. When an adapter is used, a special ring is required; these rings will interchange on the 10 and 15 H. P. "Y" engines. Pulley rims are interchangeable among themselves, also with those for 20 and 25 H. P. clutches.

The following sizes of rims are standard and can be furnished on order. Dimensions show diameters and belt widths. The actual pulley faces are slightly wider.

16 x 6	24 x 6	16 x 8	24 x 8	32 x 8
18 x 6	26 x 6	18 x 8	26 x 8	34 x 8
20 x 6	28 x 6	20 x 8	28 x 8	36 x 8
22 x 6	30 x 6	22 x 8	30 x 8	

Clutch Pulley for 20 H. P. "Z" and 20 and 25 H. P. "Y" Engines

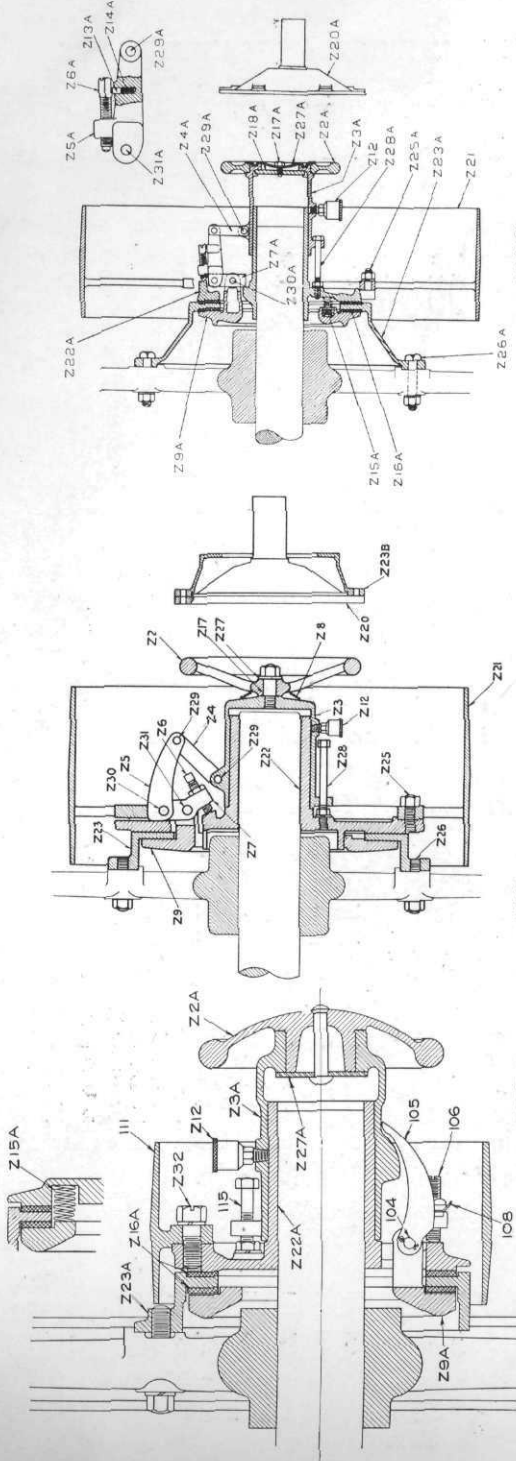
The clutch pulley is regularly adaptable to either side of the 20 H. P. type "Z" engine and to the opposite governor sides of 20 and 25 H. P. "Y" engines. By the use of a special adapter, which is furnished on order, this clutch may be used on the governor side of a "Y" engine.

All parts of this clutch are interchangeable on 20 and 25 H. P. engines. Rims are interchangeable with those on 10 and 15 H. P. clutch pulleys.

The following sizes of rims are standard and can be furnished on order. Dimensions show diameters and belt widths. The actual pulley faces are slightly wider.

16 x 8	22 x 8	28 x 8	34 x 8
18 x 8	24 x 8	30 x 8	36 x 8
20 x 8	26 x 8	32 x 8	

Repair Parts List Type "Z" Clutches



(409ND1) 3 and 6 H. P. Clutch
 (394ND) 10 and 15 H. P. Clutch
 (161SC) 20 and 25 H. P. Clutch

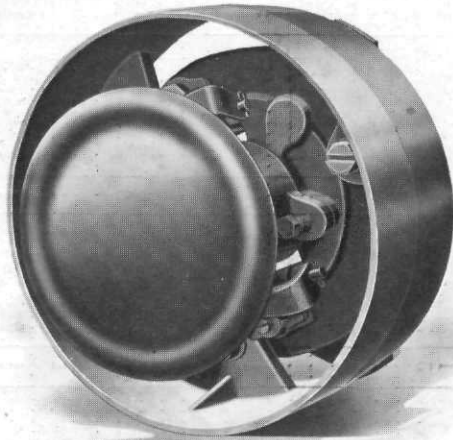
REPAIR PARTS LIST FOR TYPE "Z" CLUTCH PULLEYS

When ordering repair parts for clutch pulleys always give the description as given in this list by the repair number or symbol and name of the part wanted. Also the size, type and number of the engine upon which the clutch is used.

REPAIR NUMBER	NAME OF PART	Part of Clutch	Symbol or Size	Part of Clutch	Symbol or Size	Symbol or Size
3 & 6 H.P. Clutch	Hand Wheel	1	SC2185A	1	SC2046A	20 and 25 H. P. Clutch
Z2A	Hand Wheel Rivet	1	3/8 x 2	1	SC2052	1
Z3A	Clutch Cone	1	SC2220A	1	SC2133	1
Z3A	Clutch Cone 10 H. P. "y"	1		1	SC2049	6
Z3A	Clutch Cone 15 H. P. "y"	1		1	SC2067	3
Z4A	Clutch Lever Link	2	SC2217	3		3
Z5A	Clutch Lever	2	No. 537C	3		3
Z6A	Clutch Lever Pin and 2 Cotters (3/32" x 3/8")	2	3/8 x 1 3/4	3		3
Z6A	Adjusting Screw	2		3		3
Z6A	Adjusting Screw Nut	2		3		3

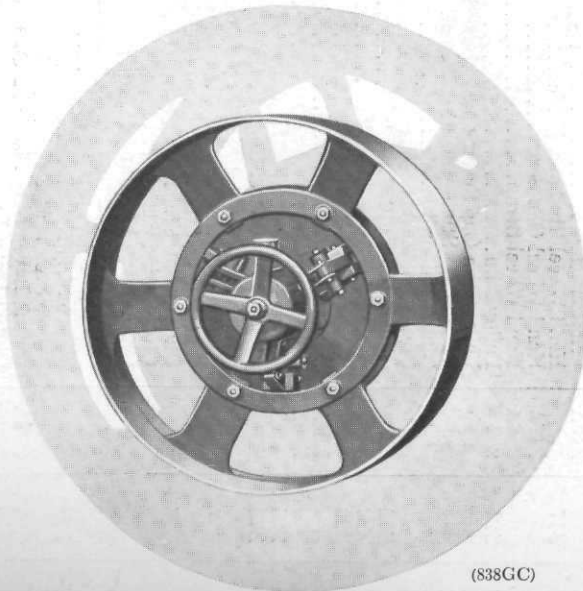
Repair Parts List Type "Z" Clutches

REF.	NUMBER	NAME OF PART	Symbol or Size 3 and 6 H. P. Clutch	Used	Symbol or Size 10 and 15 H. P. Clutch	Used	Symbol or Size 20 and 25 H. P. Clutch
	Z7	Take Up Block			SC2065	3	SC3006
	Z8	Hand Wheel Spring			No. 849A		
Z9A	Z9	Friction Plate	SC2216A	1	SC2051	1	SC2993
Z12	Z12	Grease Cup	No. 000 (3/8")	1	No. 1 (1/4")	1	No. 2 (1/4")
	Z13A	Adjusting Screw Lock Pin					No. 408
108	Z14A	Adjusting Screw Spring					No. 268
Z15A	Z15A	Clutch Spring	SC2219	2			No. 852
Z16A	Z16A	Friction Ring	SC2221A	2			SC3002
	Z17	Hand Wheel Stud and 3/8" Nut	SC3048A	2	SC2047	1	7/16" x 3/4"
	Z17A	Hand Wheel Cap Screw					SC3005
	Z18A	Hand Wheel Strap					Size-
Z21	Z21	Pulley Rim	Size-	1	Size-	1	1 1/2" x 2"
Z32	Z32	Pulley Rim Cap Screw and 1/2" Lock Washer	ZBA1395	3			
Z22A	Z22	Pulley Rim Stud—1/2" Nut and Lock Washer					
Z22A	Z22	Clutch Spider 3 H. P.	SC2215B	1	1 1/2" x 1 7/8"	6	
	Z22	Clutch Spider 6 H. P.	SC2215C	1			
	Z22	Clutch Spider 10 H. P. "Z"					
	Z22	Clutch Spider 10 H. P. "Y"					
	Z22	Clutch Spider 15 H. P.					
	Z22A	Clutch Spider 20 and 25 H. P.					SC2992
Z23A	Z23A	Clutch Ring	SC2140B	1			SC2995
Z23	Z23	Clutch Ring 10 and 15 H. P. "Z"			SC2053	1	
Z23	Z23	Clutch Ring 10 and 15 H. P. "Y"			SC2134	1	
	Z26	Clutch Ring Cap Screw and 1/2" Lock Washer (3 H. P.)	1 1/2" x 1 3/8"	3			
	Z26	Clutch Ring Cap Screw and 1/2" Lock Washer (6 H. P.)	1 1/2" x 2"	3			
	Z26	Clutch Ring Studs and 1/2" Nut (10 H. P. "Y" and 10-15 HPZ)					
	Z26	Clutch Ring Studs and 3/8" Nut (15 H. P. "Y")					
	Z26	Clutch Ring Bolts and 5/8" Nut (20 H. P. "Z")					
	Z26	Clutch Ring Bolts and 3/8" Nut (20 and 25 H. P. "Y")					
	Z27	Hand Wheel Washer					
Z27A	Z27A	Hand Wheel Retaining Plate	SC2467A	1	SC2048	1	SC3004
	Z28	Sleeve Stop Bolt					
	Z28	Sleeve Stop Bolt Nut and Lock Washer	5/16" x 2 1/2"	1	3/8" x 4 1/2"	1	3/8" x 4 1/2"
	Z28	Sleeve Stop Bolt	5/16"	1			
Z29A	Z29A	Clutch Lever Link Pin and 2 Cotter's (3/32x5/8")			No. 623C	6	No. 627C
Z30A	Z30A	Clutch Lever Pin			No. 840C	3	No. 751C
	Z31	Clutch Lever Pin Cotter's	1 1/2" x 1"	6			3/32" x 3/8"
	Z31	Take Up Block Pin	No. 852C	3	No. 852C	3	No. 737C
	Z31	Take Up Block Pin Cotter					3/32" x 5/8"
	Z23B	When Using Clutch on Governor Side of "Y" Engines					
Z20	Z20	Clutch Ring—10 and 15 H. P. "Y"					
Z20	Z20	Clutch Adapter 10 H. P. "Y"			SC3030	1	
	Z20	Clutch Adapter 15 H. P. "Y"			SC3031	1	
	Z20	Clutch Adapter 20 and 25 H. P. "Y"			SC3032	1	SC2994
	Z20A	Clutch Ring Bolt and Nut					5/8" x 1 1/2"



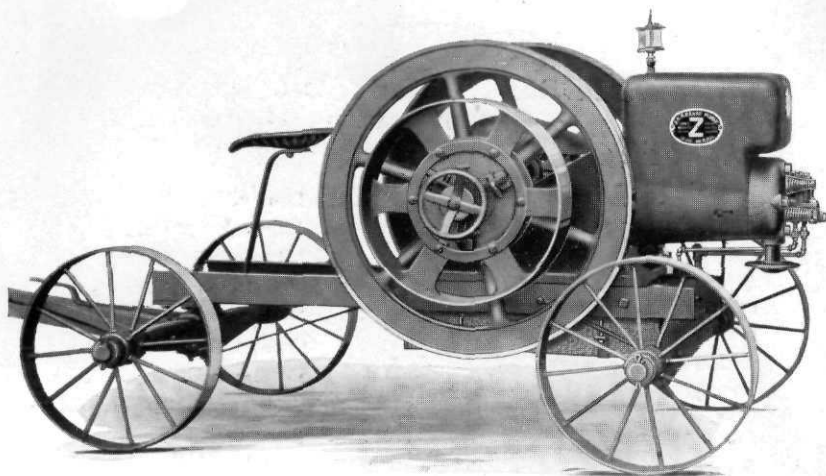
(3291G)

3 and 6 H. P. Clutch Pulley



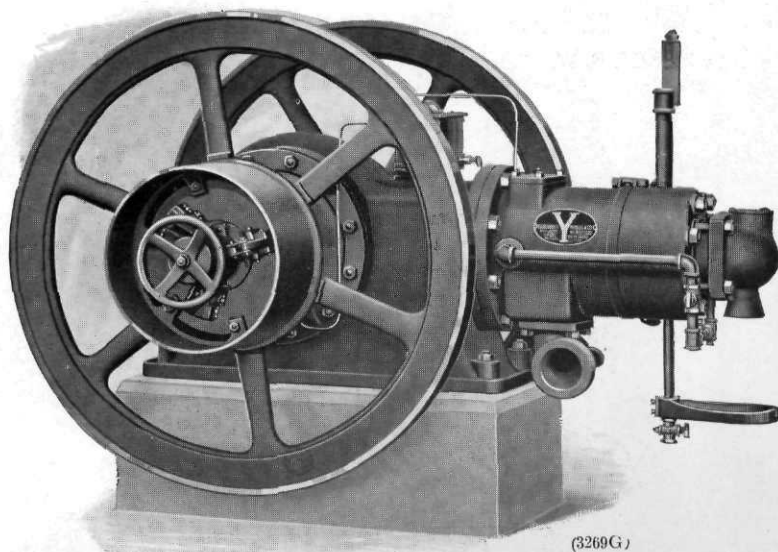
(838GC)

10 and 15 H. P. Clutch Pulley



(Fig. 3262G)

10 H. P. "Z" Engine with Type "Z" Clutch Pulley



(3269G)

15 H. P. "Y" Engine with Type "Z" Clutch Pulley

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