HAYES®

We've Got Connections

POWER TRANSMISSION PRODUCTS

Hayes Manufacturing, Inc.
6875 US Highway 131
Fife Lake, MI 49633
Phone: 231-879-3372 | Fax: 231-879-4330
www.hayescouplings.com

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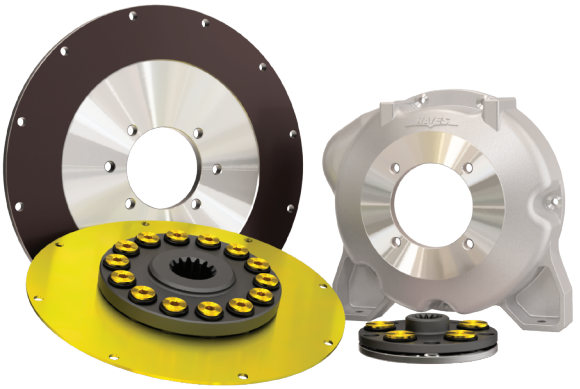
ORIGINAL FLYWHEEL COUPLINGS

There are thousands of Hayes Original Flywheel Couplings in service throughout the world. They are used in gas and tough diesel engine applications where torsional vibration occurs. Our flexible neoprene elements absorb vibration and reduce shock loads, while providing a steady dampening effect.



Hayes couplings take up very little space while transmitting a surprising amount of torque. They're available with a wide variety of spline and bores & keys that come ready to bolt to your flywheel. The splines do not lock onto the shaft in order to allow for any axial movement. This is similar to a drive shaft assembly in automotive applications.

All components have been designed for maximum life (when operated at normal engine speeds, torque, alignment, and appropriately serviced). Please call your local distributor or our factory for assistance.

Design Characteristics:

Steel Yellow Zinc (Trivalent by 1-1-07) Flywheel Plate

- Sturdy, steel plate for continuous load support
- Yellow Zinc (Trivalent by 1-1-07) plating to protect against corrosive wear

Drive Hub

- Precision machined for consistent quality
- Heat-treated splines to prevent premature shaft wear
- Two set screws for clamping bore and key applications
- Large driving surfaces for easy installation and longer drive life
- Splined and bore and key options for your specific applications
- Multiple hub lengths allow for easy installation in any standard SAE or non-standard application

Features and Advantages:

- Absorbs vibration and shock loads to optimize the life of your pump components
- Provides a steady dampening effect under load
- Rugged steel construction
- Eliminates human error with our easy, one-piece design (perfect for a production environment)!
- Operating temperatures: -40 to +220 F
- Various series for standard SAE flywheels and non-standard flywheels (including engine housings)
- Competitively priced and normally in stock
- Spline lubrication including the coupling assembly

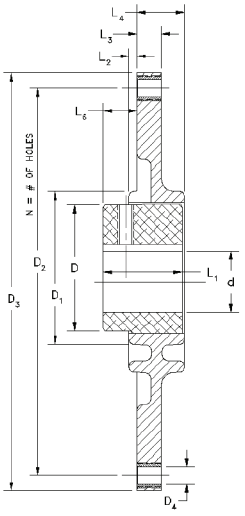
Applications:

- Our one-piece coupling is used on off-highway construction equipment
- Aerial lifts, bucket loaders, skid-steer loaders, excavators, sweepers, wheeled loaders, and more.
- Consult factory for applications not listed

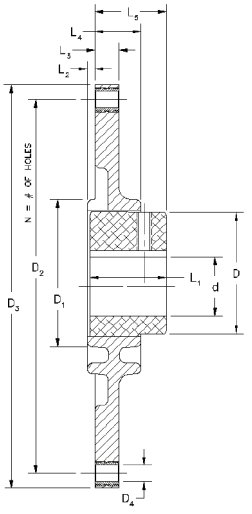
HEX-FLX FLYWHEEL COUPLINGS

2-Piece HEX-FLX Couplings

- High torsional stiffness for operation below critical speeds
- Operating temperatures: -40 to +220 F
- Light and compact with long service life
- Handles high shock loads
- Easy, two-piece blind mounting
- Customizable, sintered hub lengths
- Various series for standard SAE flywheels
- Secure locking system to eliminate fretting
- Economically priced and usually in stock

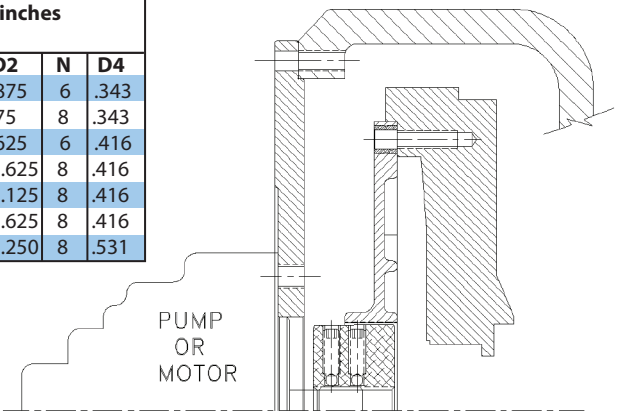


Short Mounting



Standard Mounting

Flange Dimensions in inches (SAE J 620)					
Part Number	Size	D3	D2	N	D4
B-065	6-1/2	8.50	7.875	6	.343
C-075	7-1/2	9.50	8.75	8	.343
C-080	8	10.375	9.625	6	.416
C-010	10	12.375	11.625	8	.416
DT-115	11-1/2	13.875	13.125	8	.416
DT-010	10	12.375	11.625	8	.416
DT-014	14	18.375	17.250	8	.531



IMPORTANT:
For proper assembly instructions, please refer to assembly drawings provided by Hayes. The mounting instructions provided on the assembly drawing will ensure the hub is properly located and clamped to pump or motor shaft.
(torque wrench required)

Coupling Dimensional Information (English)

Size	Finish Bore		Dimensions (inches)								Dimension to SAE					Optimal Hub
	Max	Min	D	D1	L1	L2	L3	L4	L5	L6	6-1/2	7-1/2	8	10	11-1/2	Location within
HB1	1.375	.508	2.015	3.109	1.13	.16	.50	.96	1.02	.217	•					0.04
HB2	1.375	.508	2.015	3.109	1.35	.16	.50	.96	1.24	.437	•					0.04
HB3	1.375	.508	2.015	3.109	1.60	.16	.50	.96	1.49	.687	•					0.04
HB4	1.375	.508	2.015	3.109	1.90	.16	.50	.96	1.79	.987	•					0.04
HC1	2.0	.508	2.522	4.198	1.33	.16	.50	.96	1.22	.412		•				0.04
HC1	2.0	.508	2.522	4.198	1.33	0	.50	1.13	1.38	.257			•	•		0.04
HC2	2.0	.508	2.522	4.198	1.60	.16	.50	.96	1.48	.687		•				0.04
HC2	2.0	.508	2.522	4.198	1.60	0	.50	1.13	1.65	.527			•	•		0.04
HC3	2.0	.508	2.522	4.198	1.75	.16	.50	.96	1.63	.837		•				0.04
HC3	2.0	.508	2.522	4.198	1.75	0	.50	1.13	1.90	.677			•	•		0.04
HC4	2.0	.508	2.522	4.198	2.13	.16	.50	.96	2.01	1.217		•				0.04
HC4	2.0	.508	2.522	4.198	2.13	0	.50	1.13	2.28	1.057			•	•		0.04
HC5	2.0	.508	2.522	4.198	2.38	.16	.50	.96	2.26	1.467		•				0.04
HC5	2.0	.508	2.522	4.198	2.38	0	.50	1.13	2.53	1.307			•	•		0.04
HC6	2.0	.508	2.522	4.198	2.44	.16	.50	.96	2.32	1.527		•				0.04
HC6	2.0	.508	2.522	4.198	2.44	0	.50	1.13	2.59	1.367			•	•		0.04
HDT1	3.0	.750	3.834	6.500	1.60	.335	.83	1.155	1.32	.485					•	0.04
HDT2	3.0	.750	3.834	6.500	2.00	.335	.83	1.155	1.72	.890					•	0.04
HDT3	3.0	.750	3.834	6.500	2.44	.335	.83	1.155	2.16	1.325					•	0.04

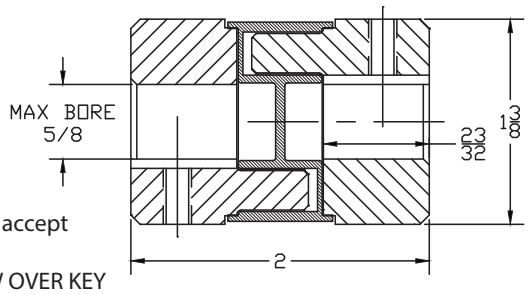
HAYES JAW COUPLINGS

This simple, three piece, quality built, flexible coupling is generally used to connect an electric motor to a hydraulic pump or mechanical drive. The hubs are made of a strong, lightweight aluminum alloy. The bodies and lugs are precision machined on CNC equipment to assure proper fit every time. Two set screws are standard. The solid wall of rubber in the insert eliminates metal-to-metal contact and provides a clean, quiet, trouble free performance when aligned properly. The unique steel locking insert is standard on all splined couplings in the 20 through 60 series. For the mobile market, taper lock splines are also available in the same series. Three insert choices are available. Neoprene, Hytrel* and Neoprene with a metal ring. Neoprene is used for light or steady loads. Hytrel*, for industrial application where torque, a variety of load conditions or chemicals exist. Neoprene with a metal ring for medium and heavy torque conditions and internal combustion engine applications. Installation requires only a straight edge and feeler gage to insure proper alignment. For longer insert life, misalignment should not exceed .005 parallel or 1° angular.

XO SERIES

5/8" Max Bore

MAX FRAME SIZE: 48
MAXIMUM RECOMMENDED
TORQUE: .75 HORSEPOWER
AT 1800 RPM

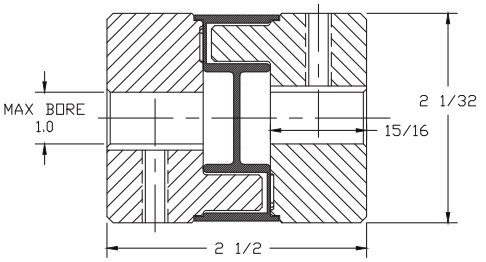


- Drive insert will accept a 1/2" shaft
- ONE SET SCREW OVER KEY This series only
- DRIVE INSERT MATERIAL Hytrel*
- Approx. Weight Blank Bore: 4 oz.

10 SERIES

1" Max Bore

MAX FRAME SIZE: 145T 184
MAXIMUM RECOMMENDED
TORQUE: 2.7 HORSEPOWER
AT 1800 RPM

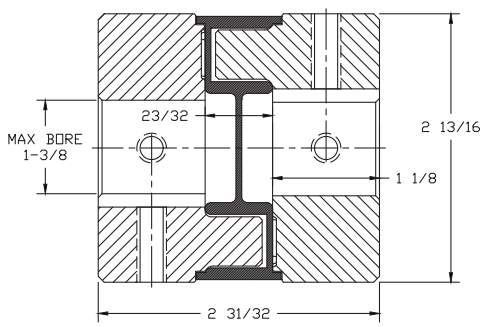


- Drive insert will accept a 7/8" shaft
- DRIVE INSERT MATERIAL Hytrel* or Neoprene
- Approx. Weight Blank Bore: 10 oz.

20 SERIES

1-3/8" Max Bore

MAX FRAME SIZE: 184T 215
MAXIMUM RECOMMENDED
TORQUE: 5.1 HORSEPOWER
AT 1800 RPM

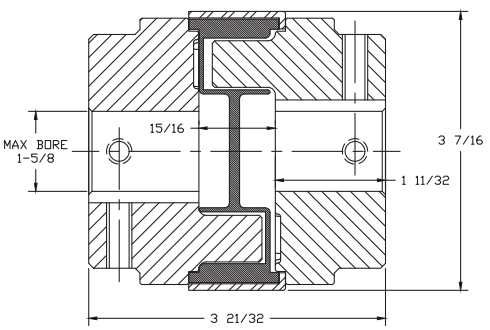


- Drive insert will accept a 1-1/8" shaft
- DRIVE INSERT MATERIAL Hytrel* or Neoprene
- Approx. Weight Blank Bore: 1-1/2 lbs.

30 SERIES

1-5/8" Max Bore

MAX FRAME SIZE: 215T 256U
MAXIMUM RECOMMENDED
TORQUE: 10.2 HORSEPOWER
AT 1800 RPM

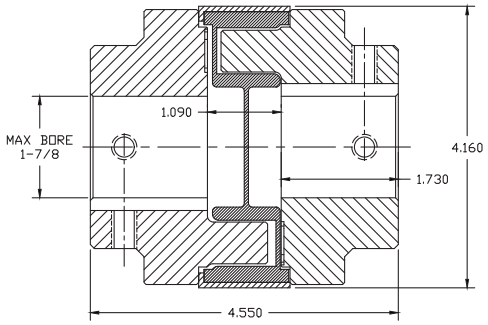


- Drive insert will accept a 1-3/8" shaft
- DRIVE INSERT MATERIAL Hytrel* or Neoprene
- Approx. Weight Blank Bore: 2-1/2 lbs.

HAYES JAW COUPLINGS

40 SERIES
1-7/8" Max Bore

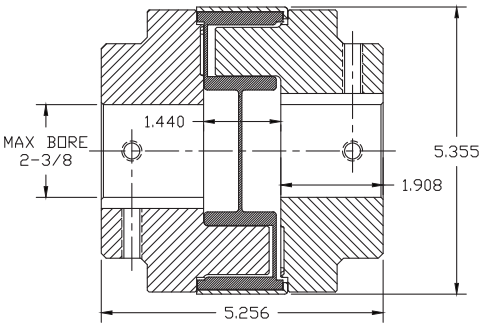
MAX FRAME SIZE: 326 405TS 365U
MAXIMUM RECOMMENDED
TORQUE: 30 HORSEPOWER
AT 1800 RPM



- Drive insert will accept a 1-7/8" shaft
- DRIVE INSERT MATERIAL Hytrel* or Neoprene
- Approx. Weight Blank Bore: 4 lbs.

50 SERIES
2-3/8" Max Bore

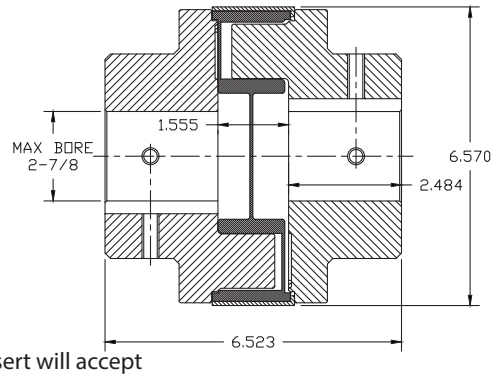
MAX FRAME SIZE: 326 405TS 365U
MAXIMUM RECOMMENDED
TORQUE: 75 HORSEPOWER
AT 1800 RPM



- Drive insert will accept a 2-1/4" shaft
- DRIVE INSERT MATERIAL Hytrel* or Neoprene
- Approx. Weight Blank Bore: 8 lbs.

60 SERIES
2-7/8" Max Bore

MAX FRAME SIZE: 365T 445TS 405U 445US
MAXIMUM RECOMMENDED
TORQUE: 114.1 HORSEPOWER
AT 1800 RPM



- Drive insert will accept a 2-3/4" shaft
- DRIVE INSERT MATERIAL Hytrel* or Neoprene
- Approx. Weight Blank Bore: 12 lbs.

HAYES JAW COUPLINGS

STEEL LOCKING INSERT

STANDARD ON ALL SPLINED COUPLINGS 20 THROUGH 60 SERIES

For spline shaft applications, we use a split system and steel locking insert to provide more holding power and to protect splined shafts. It is commonly used on power units and hydrostatic drives.

INSTALLATION INSTRUCTIONS:

1. Tighten socket head cap screw for split locking system.
2. Tighten set screw on large diameter to bring steel locking insert down against shaft.

TAPER LOCK SYSTEM

STANDARD ON ALL SPLINED COUPLINGS 20 THROUGH 60 SERIES

The Hayes taper lock bushings are competitively priced, strong, durable, and used primarily in the mobile market. The tapers are drawn together with socket head cap screws which are tightened from the lug side of the coupling, allowing you to get closer to the pump face. The steel taper lock bushing provides uniform pressure on the shaft to help prevent movement and the resulting damage.

NEOPRENE DRIVE INSERT

Typically used where light or steady load conditions exist, also resists degradation from sun, ozone and weathering. Temperature range from 0°F to +220°F (-18°C to 104°C). A Metal Ring is recom-mended for medium and heavy torque conditions, as well as internal combustion engine applications.

HYTREL DRIVE INSERT

Designed for INDUSTRIAL applications where torque and a variety of load conditions exist. It also has good chemical and abrasion resistance. Temperature range -65°F to +250°F (-54°C to +121° C).

METAL RING

For Neoprene Insert ONLY

A Metal Ring is recommended (only for neoprene inserts) for medium and heavy torque conditions, as well as internal combustion engine applications. The Ring slips over the insert to contain the rubber and increases load capacity. May be used in some cases to allow over size bores in next smaller series coupling.

Consult factory for more information.

HAYES JAW COUPLINGS

Our flexible drive coupling has been tested by the University of Michigan Mechanical Engineering Department. The guide below gives you the usable results of these tests. A safety factor of 3 applied to the recommended maximum torque is shown in the guide.

Before Ordering you need to know the following:

1. Type of prime mover and load classification
2. Shaft diameter and key size
3. Horsepower rating of prime mover
4. Maximum operating speed (R.P.M.).

Ordering Instructions:

A. To locate your proper coupling series use the service factor guide below and locate your prime mover and load classification.
(Example: a 30 H.P. electric motor for a pump with a medium load application = 1.5 service factor.)

B. Multiply the H.P. of the load to be transmitted by S.F. then divide by 3.
(Example: 30 H.P. x 1.5 S.F. = 45 H.P. ÷ 3 = 15 H.P.)

C. With this figure, refer to the performance data guide and locate the R.P.M.'s at which you motor operates
(Example: 1800 R.P.M.'s)

D. Move down the chart until you come to the first H.P. larger that you need.
(Example: 1-5/8 shaft x 3/8 key = 40 Series H.P.) If Neoprene is used a metal ring is recommended.

Service Factor Guide

Load Classification		Prime Mover		
		Electric Motor or Turbine	6 or more Cyl. Gas or Diesel Eng.	Less than 6 Cyl. Gas or Diesel Eng.
Light or Uniform Load Even or steady Load Non-Reversing	• Blowers • Conveyers • Centerifugal Pumps • Fans • Agitators	1.0	1.5	*2.0
Medium or Moderate Load Moderate Shock Uneven Load Infrequent Reversing	• Elevators • Mixers • Machine Tools • Reciprocating Pumps	1.5	*2.0	*2.5
Heavy Load Heavy Shock Uneven Load Frequent Reversing	• Shaker Conveyors • Crushers • Presses • Winches	*2.0	*2.5	Neoprene with Metal Ring Only 3.0

NOTE- Use as general guide only

Optional: *Hytrel or Neoprene with Metal Ring

Performance Data Guide

Coupling Series	Coupling Size			Maximum Reccom-mended Torque in lbs.	Maximum Torque in lbs. †	HORSEPOWER	Maximum R.P.M.									
	Outside Dia.	Overall Length	Max. Bore				100	300	600	900	1200	1500	1800	2400	3000	3600
XO	1.375	2.00	5/8		26		.04	.12	.25	.37	.50	.62	.75	1.0	1.2	1.5
10	2.025	2.56	1	900	96		.15	.45	.91	1.37	1.82	2.28	2.7	3.6	4.56	5.4
20	2.825	2.96	1-3/8	2,150	180		.28	.85	1.71	2.57	3.42	4.28	5.1	6.8	8.5	10.2
30	3.275	3.62	1-5/8	3,000	362		.57	1.71	3.42	5.14	6.85	8.56	10.2	13.7	17.1	20.5
40	4.062	4.50	1-7/8	4,500	1052		1.66	5.00	10.01	15.01	20.01	25.01	30.0	40.0	50.0	60.0
50	5.260	5.21	2-3/8	9,000	2628		4.16	12.50	25.01	37.52	50.03	62.54	75.0	100.0	125.0	150.1
60	6.450	6.43	2-7/8	13,500	3996		6.34	19.02	38.04	57.06	76.08	95.10	114.1	152.1	190.2	228.2

*Hub strength static tested by University of Michigan, Mechanical Engineering Department
†Safety factor of three applied
H.P. and torque ratings are for aluminum couplings. For rating on steel (special) consult factory

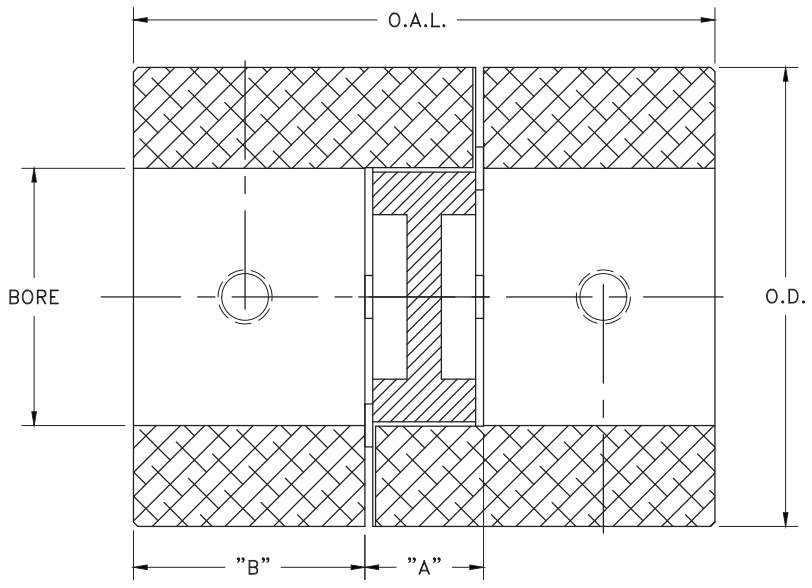
L-SERIES JAW COUPLINGS

Our L-Series jaw coupling is offered in a large variety of bore and key options, as well as splines. These couplings are designed for a range of different applications using electrical motors as well as internal combustion engines. This design offers a standard shaft-to-shaft connection ideal for many industrial duty applications. In addition, you can interchange this coupling with other popular domestic brands. The addition of this product to our extensive list of power transmission products allows us to provide our customers with a diverse, and economical product line.

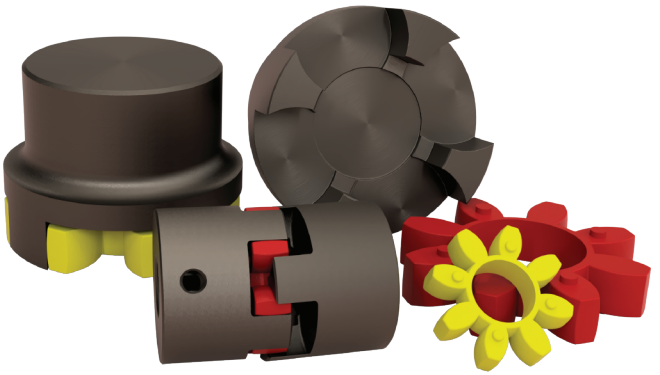
Couplings are sintered iron and available with a number of different drive elements: Buna-N, Urethane, and Hytrel

Hayes L-Series Jaw Coupling Sizing Chart

Coupling #	Torque	O.D.	O.A.L	A	B	Bore Metric		Bore Inch	
						Min	Max	Min	Max
L035	4 inlb	0.630	0.811	0.295	0.260	3	8	3/16	5/16
L050	26 inlb	1.083	1.701	0.480	0.610	6	16	1/4	5/8
L070	43 inlb	1.378	1.937	0.480	0.728	9	20	1/4	3/4
L075	90 inlb	1.752	2.142	0.488	0.827	9	26	5/16	1
L090	144 inlb	2.126	2.165	0.512	0.827	9	28	3/8	1-1/8
L095	144 inlb	2.126	2.402	0.512	0.945	9	28	3/8	1-1/8
L099	318 inlb	2.559	2.874	0.709	1.818	12	36	1/2	1-3/8
L100	417 inlb	2.559	3.465	0.709	1.417	12	36	1/2	1-3/8
L110	792 inlb	3.346	4.331	0.866	1.732	15	48	1/2	1-7/8
L150	1240 inlb	3.780	4.665	1.047	1.811	15	48	5/8	1-7/8
L190	1726 inlb	4.528	5.453	1.126	2.677	19	58	5/8	2-1/4
L225	2340 inlb	5.000	6.004	1.126	3.287	19	60	3/4	2-3/8



CURVED JAW COUPLINGS



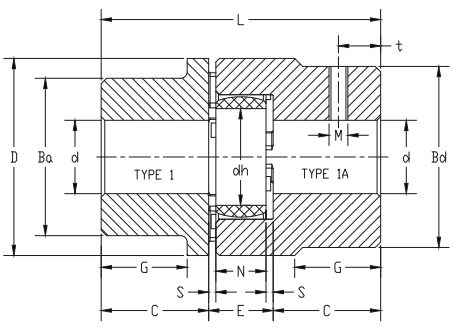
This three-piece curved jaw design was specifically designed to reduce the edge pressure of the driving lugs to the insert. These couplings are perfectly interchangeable with other German and Italian designs of the same type. Hubs are made in both aluminum, and sintered steel. The elements, or spiders, are made from variable durometer urethane. Available in 10 sizes, bores to 110mm (4.33). These couplings are great for electric motor driven pumps, gearboxes, conveyors, as well as applications with reversing loads, due to compressive nature of the design. These couplings are torsionally flexible and designed to dampen operational vibrations and shock loading. With the teeth of the spider being crowed, to avoid edge pressure, it allows for greater shaft misalignments over couplings of a similar design (Straight Jaw). With the concave tooth design this coupling is subject to a pressure only load as compared to other straight jaw couplings, which are prone to a bending stress as well. Due to this difference in driving ability, the coupling will withstand considerably higher loads.

Product Characteristics:

- Greater compensation for axial, radial and angular shaft misalignments than standard straight jaw couplings.
- Axial Plug In
- Easy Assembly
- Operating temperature Range (-40°F to +212 °F), Max temperature of 248 °F
- Dampens torsional vibrations
- Multiple bore options (English, Metric, Splined, Tapered, etc.)
- No Lubrication Required
- No Metal to Metal Contact
- Urethane spiders provide high abrasion resistance and elasticity.
- Resistant to oil, dirt, sand, grease, moisture, many solvents.

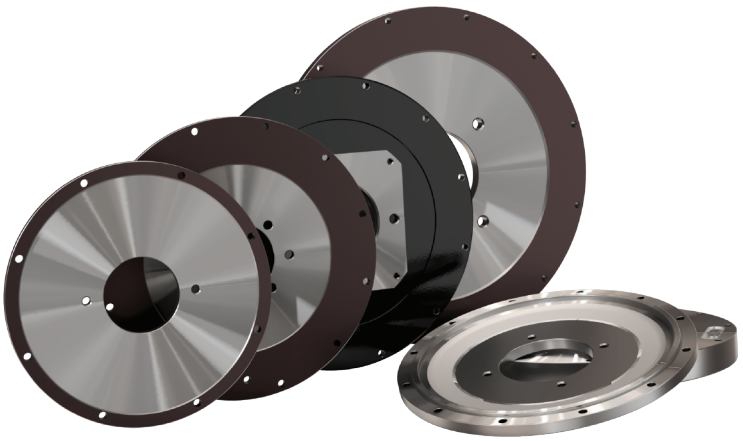
Hayes Curved Jaw (English)

Size	Type	Spider Rated Torque (ft.lbs)			Std Bore	Finish Bore	L	C	E	N	S	D	dh	Ba;Bd	G	Finish Bore	
		92 Sh A	98 Sh A	64 Sh D	(d)	(d) min-Max										M	t
19/24	1a	7	12	15	0.24	.24 - 1.00	2.60	0.98	0.63	0.47	0.08	1.57	0.71	1.57	-	M5	0.39
24/32	1a	26	44	55	0.35	.35 - 1.38	3.07	1.18	0.71	0.55	0.08	2.17	1.06	2.17	-	M5	0.39
28/38	1a	70	118	147	0.39	.39 - 1.57	3.54	1.38	0.79	0.59	0.10	2.56	1.18	2.56	-	M8	0.59
38/45	1	140	239	299	0.47	.47 - 1.88	4.49	1.77	0.94	0.71	0.12	3.15	1.50	2.76	1.46	M8	0.59
42/55	1	195	331	413	0.47	.47 - 2.16	4.96	1.97	1.02	0.79	0.12	3.74	1.81	3.35	1.57	M8	0.79
48/60	1	229	387	483	0.47	.47 - 2.44	5.51	2.20	1.10	0.83	0.14	4.13	2.01	3.74	1.77	M8	0.79
55/70	1	302	505	608	0.59	.59 - 2.83	6.30	2.56	1.18	0.87	0.16	4.72	2.36	4.33	2.05	M10	0.79
65/75	1	461	693	866	0.59	.59 - 3.14	7.28	2.95	1.38	1.02	0.18	5.31	2.68	4.53	2.40	M10	0.79
75/90	1	944	1,416	1,770	0.59	.59 - 3.74	8.27	3.35	1.57	1.18	0.20	6.30	3.15	5.31	2.72	M10	0.98
90/100	1	1,770	2,655	3,319	1.50	1.50 - 4.33	9.65	3.94	1.77	1.34	0.22	7.87	3.94	6.30	3.19	M12	0.98



PUMP MOUNTING PLATES

Hayes Pump Mounting Plates are designed to carry your toughest loads. Our customers hang pumps, motors, blowers, gearboxes, and many other driven components from our pump mounting plates. They are machined to give you maximum thread engagement and can be customized for your specific application.



Design Characteristics:

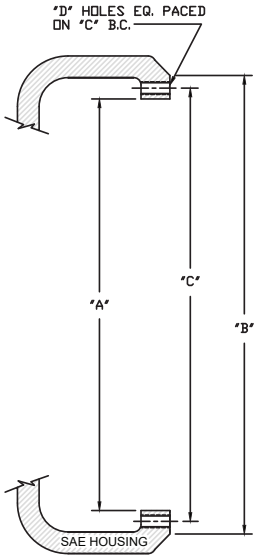
Features and Advantages:

- Sturdy, steel plate for continuous load support.
- Multiple thickness options
- Yellow zinc plating available
- Black zinc plating available
- Custom painted available

Applications:

Aerial lifts • bucket loaders • skid-steer loaders • excavators • sweepers • wheeled loaders and more. Consult factory for applications not listed

Dimensional Information:



HAYES SAE PUMP MOUNTING PLATE DIMENSIONS						
HOUSING SIZE	"A" PILOT	"B" O.D.	"C" B.C.	PLATE THICKNESS	"D" MOUNTING PLATE HOLES	
					# OF HOLES	SIZE
1	20.125	21.750	20.875	1" OR 5/8"	12	31/64
2	17.625	19.250	18.375	1" OR 5/8"	12	27/64
3	16.125	17.750	16.875	5/8"	12	27/64
4	14.250	15.880	15.000	5/8"	12	27/64
5	12.375	14.000	13.130	5/8"	8	27/64
6	10.500	12.120	11.250	5/8"	8	27/64

YOKE DRIVE FLYWHEEL COUPLINGS

We designed the Yoke Flange Coupling to assist a customer who had been using a competitor's coupling andhad ben dealing with multiple coupling failures. The Hayes Yoke Flange Coupling came to the rescue and solved their coupling failure nightmare! This is a Coupling you can count on for tough diesel applications!

Design Characteristics:

Steel Flywheel Plate

- The flywheel plate can be adjusted for specific inertia requirements.
- Manufactured from a steel burnout or custom forging (Depending on the application)
- Precision-machined for accurate balance.
- Secondary drive bolts can be added (in case of coupling failure - never been used)

Drive Hub

- Support bearing to centralize driving load
- Precision-machined for accurate balance
- Strongest and largest drive insert that Hayes manufactures
- Multiple yoke mounts available for your drive requirements
- Multiple hub lengths for easy installation in any standard SAE or non-standard application

Features and Advantages:

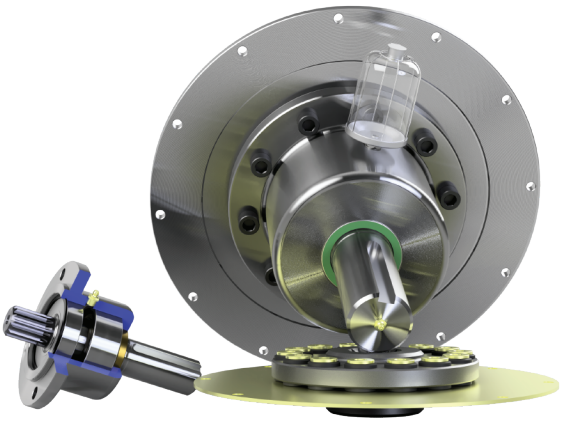
- Absorbs vibration and shock loads (lengthening the life of your pump or gear box components)
- Provides a steady dampening effect under load
- Designed for maximum life (when operated at normal engine speeds, torque and alignment)
- Rugged, steel construction
- Eliminates human error with our easy, one-piece design (perfect for a production environment)!
- Operating temperatures: -40 to +220 F
- Various series for standard SAE flywheels and non-standard flywheels (including engine housings)
- Competitively priced and normally in stock

Applications:

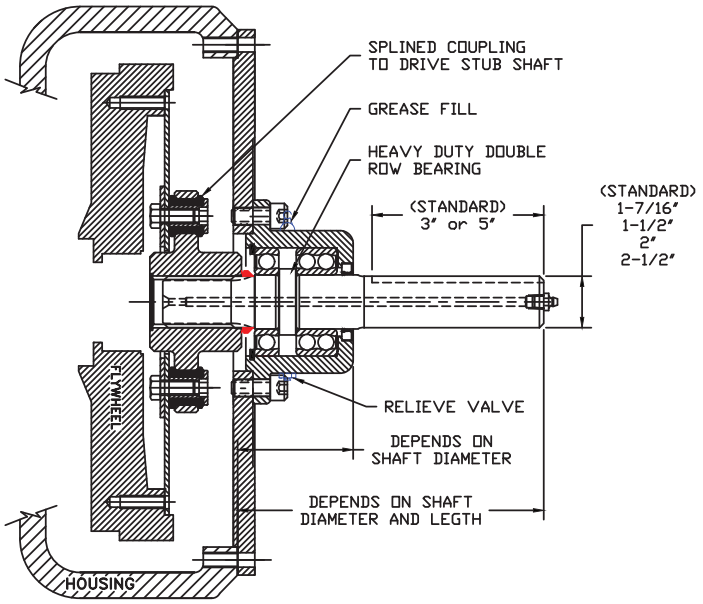
- This one-piece coupling is used on off-highway construction equipment
- Aerial lifts • Telehandlers • Railroad equipment • Hybrid vehicles
- Consult factory for applications not listed

BEARING SUPPORTED STUB SHAFTS

The Hayes Stub Shaft design employs a single and double roll radial ball bearing designed for light and heavy-duty work, not to exceed side loads listed in tables 1 through 4. The bearings are self-contained in our specially designed housing that will keep the assembly free of contamination. Hayes Bearing Supported Stub Shafts come pre-mounted to your specific flywheel housing plate or custom Hayes housing. Along with the mounted bearing support, you will also receive a Hayes Flywheel Coupling that will be sized for your application to drive the bearing support sub-assembly.



We emphasize that the data contained herein should be used as a guide only. The tabulation is based on laboratory tests but does not take into account all variables that can be encountered in actual use. Therefore, it is advisable to test the material under actual service conditions before specification. If this is not practical, tests should be devised that simulate your service conditions as closely as possible.



Specifications:

Output: Depends on your application for shaft size and length.

Ratings:

Input Torque (max.): 650 lb-ft
Input / Output Speed: 3000 rpm
Power(Max.): 350 HP
Bearings: 3 Years Continuous Running

The Hayes Bearing Supported Stub Shaft assembly is specifically designed for side load applications

SAE STUB SHAFTS

Stub shaft drive plates fit SAE depressed center flywheels. They are designed for use with a flexible coupler to direct drive auxiliary components. See Hayes L-Series or flexible couplings for shaft-to-shaft adapter to fit your application. Side loading requires the use of a pillow block bearing or Hayes Bearing supported stub shaft option. When placing an order, please use the part number listed below.

Stub Shaft Drive Plates					
Part Number	**SAE Clutch Size**	**Keyed Shaft**	**Overall Length**	**Shaft Diameter**	**Key Size**
26-01A51	6.50″	3.75″	6.00″	1.50″	3/8″
26-02A51	6.50″	3.75″	6.00″	1.75″	3/8″
26-0AA52	7.50″	3.75″	6.00″	1.438″	3/8″
26-01A52	7.50″	3.75″	6.00″	1.50″	3/8″
26-02A52	7.50″	3.75″	6.00″	1.75″	3/8″
26-01A53	8″	Special	Special	Special	Special
26-02A53	8″	Special	Special	Special	Special
26-01G54	10″	3.75″	6.00″	1.50″	3/8″
26-02B54	10″	5.38″	8.00″	1.75″	3/8″
26-03G54	10″	3.75″	6.00″	2.00″	1/2″
26-03B54	10″	5.38″	8.00″	2.00″	1/2″
26-04A55	11.50″	3.75″	6.00″	2.25″	1/2″
26-05A55	11.50″	3.75″	6.00″	2.50″	5/8″

NOTE: Stub shafts for the 14" clutches and larger are available on a non-stock basis. Special sizes, diameters and shaft lengths (keyed and overall) are available upon request. SAE #4 & #5 Side Load Plates available from stock. Ask your customer service representative for more details.

If it is determined that your assembly needs greater side load capabilities than a straight shaft and single bearing design, please contact us to discuss the use of our exclusive bearing supported stub shafts.

MARINE & IRRIGATION COUPLINGS & ADAPTERS

There are thousands of Hayes marine and irrigation couplings and adapters in service throughout the world. They are used in gas and diesel engine applications where torsional vibration occurs. Our flexible neoprene elements absorb vibration and reduce shock loads (while providing a steady dampening effect)

The coupling takes up very little space while transmitting a surprising amount of torque. They're available with a wide variety of spline and bores & key options that come ready to bolt to your flywheel. The splines do not lock onto the shaft in order to allow for axial movement. This is similar to a drive shaft assembly in automotive applications.

All components have been designed for maximum life (when operated at normal engine speeds, torque and alignment). Please call your local distributor or our factory for assistance.

Design Characteristics:

Steel Yellow Zinc Trivalent Flywheel Plate

- Sturdy, steel plate for continuous load support.
- Yellow Zinc plating to protect against corrosive wear.

Adapters

- Hurth transmission
- SAE

Drive Hub

- Precision machined for consistent quality
- Heat-treated splines to prevent premature shaft wear
- Multiple hub lengths for easy installation in any standard SAE or non-standard application

Features and Advantages:

- Absorbs vibration and shock loads (maximixing the life of your pump components)
- Provides a steady dampening effect under load
- Designed for maximum life (when operated at normal engine speeds, torque and alignment)
- Rugged steel construction
- Eliminates human error with our easy, one-piece design (perfect for a production environment)!
- Operating temperatures: -40 to +220 F
- Various series for standard SAE flywheels and non-standard flywheels (including engine housings)
- Competitively priced and normally in stock
- Spline lubrication packaged and provided by Hayes.

Applications:

- Water Pumps • Marine Transmissions • Sprayers • Gear Boxes • and more.

ALUMINUM ENGINE HOUSINGS

There are thousands of Hayes aluminum housings in service throughout the world. Together with our original Hayes flywheel coupling and our torsionally stiff HEX-FLX flywheel couplings, our aluminum housings tackle tough gas and diesel engine applications.
Hayes housings take up very little space while supporting a significant amount of weight. They are available with a wide variety of mounts and sensor options and can be used in conjunction with our bearing-supported stub shafts and generator drives.

Design Characteristics:

Sturdy Aluminum Castings:

- Heat-treated aluminum housings
- Thick walls for extra support and thread engagement

Mounts:

- Foot Mounts
- Side Mounts
- Face Mounts
- Top Mounts
- Special pump mount options are always available

Features and Advantages:

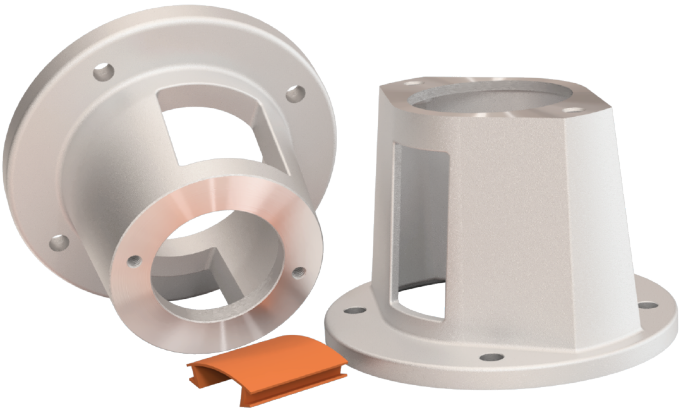
- Sturdy high-strength aluminum construction
- Custom fit to engine starter plates
- SAE and non-SAE pump mounting
- Standard and special engine mounts
- Custom/personalized housings available upon request
- Thick wall design for heavy pump applications
- Painted housings (available upon request)
- Competitively priced and normally in stock

Applications:

- Our housings are used on a variety of different diesel and gasoline applications.

ENGINE/MOTOR PUMP ADAPTERS

Gas Engine Application:



Engine Pump Adapters (bell housings) are designed to ensure proper shaft alignment when connecting an engine to a hydraulic pump. Proper shaft alignment is critical for optimizing the life of the coupling within the application. Engine Pump Adapters are a great option to reduce assembly costs (as compared to assembly costs for a foot-mounting bracket or a riser - Hayes offers these options as well).

Features and Advantages

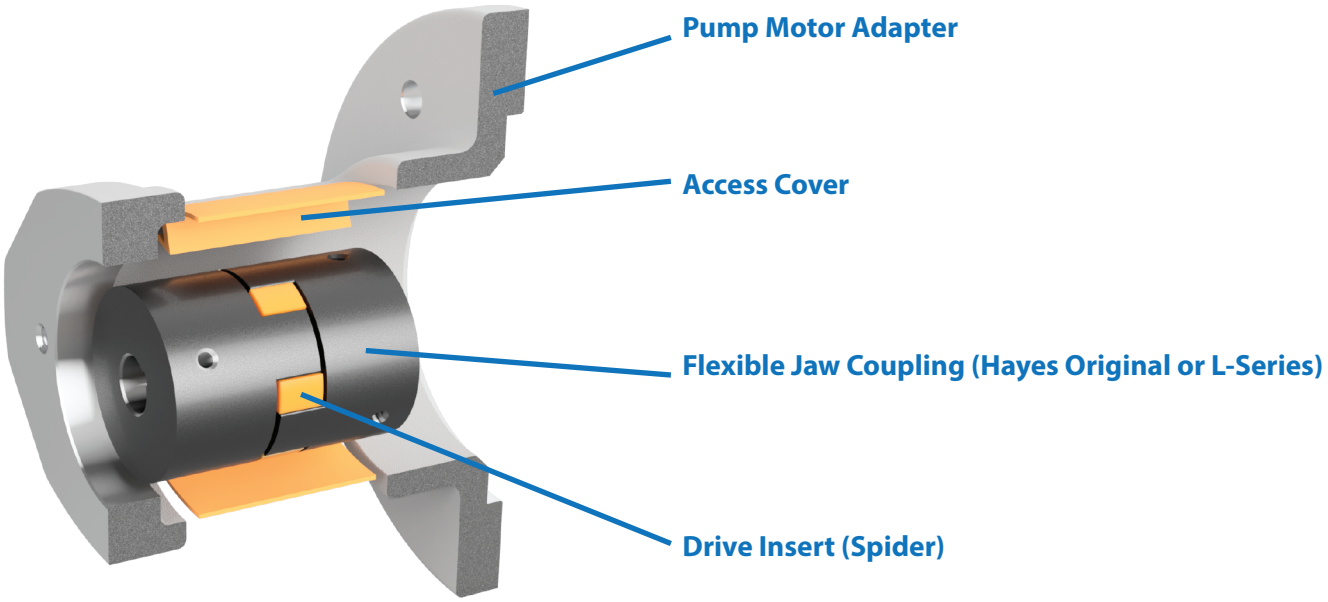
- Multiple small engine configurations
- Sturdy, aluminum construction
- Steel configurations available for custom applications
- SAE and non-SAE pump mounting
- Multiple options for pump orientation
- Drive coupling access with removable cover

Electric Motor Application:

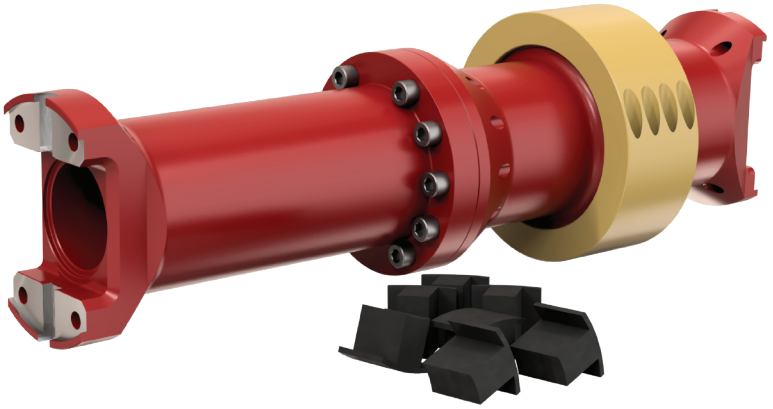
Motor Pump Adapters (bell housings) are designed to ensure proper shaft alignment when connecting an electric motor to a hydraulic pump. Proper shaft alignment is critical for optimizing the life of the coupling within the application. Motor Pump Adapters are a great option to reduce assembly costs (as compared to assembly costs for a foot-mounting bracket or a riser - Hayes offers these options as well).

Features and Advantages

- Electric Motor sizes from 56C up to 405TC/TSC
- Sturdy, aluminum construction
- SAE and non-SAE pump mounting
- Multiple options for pump orientation
- Drive coupling access with removeble cover
- Horizontal and vertical mounting options
- Steel housings available for motors larger than 405TC/TSC



MAGNUM DRIVE SHAFTS



Greasing Of U-Joints:
Grease U-Joints with a premium lithium extreme pressure (EP) grease every 250 hours.

Drive Insert Replacement Schedule:
Rubber drive inserts will vary in life from application to application. When users installs and starts running the Magnum Drive Shaft they will need to follow a strict maintenance schedule. This schedule will ensure that the inserts will not degrade to the point where the drive lugs start driving metal to metal. Once the shaft starts driving metal to metal it will need to be replaced with a complete new shaft, it will not be able to be rebuilt.

Determining Replacement Schedule:

Run for one month - remove inserts and return to Hayes Mfg. for inspection
If OK, run shaft for 2 months - remove inserts and return to Hayes Mfg. for inspection
If OK, run for 3 months and return to Hayes Mfg. for inspection
If OK,keep repeating this schedule, adding 1 month each time, until you are told by Hayes Mfg that you have reached the point of needing to replace inserts.
*Note that only 5 of the 10 inserts should be worn, so you need to check the inserts that are actually doing the driving.

If you are running multiple Hayes drivelines you will only need to pull one Magnum Shaft from service to inspect. That way you will only need to wait 1 more month to inspect the 2-month runtime, and so on. If you do not reach the replacement interval and you have inspected all Magnum Shafts wait an additional month and then inspect the first inspected shaft again. Repeat the original process until replacement schedule is determined.

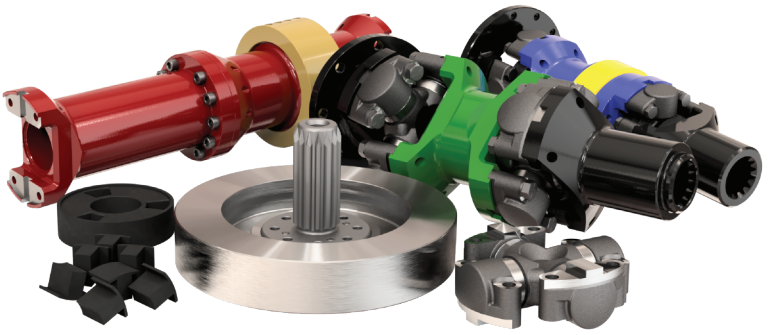
Caution: At any time if your RPM will not hold constant during test, the inserts have prematurely worn. They will need to be removed and replaced immediately.

Complete Rebuild Schedule:

The customer shall also determine a complete rebuild schedule. After drive shaft has run for 1 year, remove from dyno and inspect u-joints and internal shaft bearings. If bearing have very little play you will be able to re-assemble shaft and continue to run. If you would like to replace the bearings while the shaft is disassembled you may do so, especially if you have other dynos running the same shaft setup. Run shaft for another year before repeating process. Once you notice the bearings getting worn (sloppy or not smooth running) you will want to make note of the service time, and use that as your complete rebuild interval.

YELLOW JACKET DRIVE SHAFTS

Greasing Of U-Joints:
Grease U-Joints with a premium lithium extreme pressure (EP) grease every 250 hours.



Drive Insert Replacement Schedule:
Rubber drive inserts will vary in life from application to application. When users installs and start running the Yellow Jacket Drive Shaft they will need to follow a strict maintenance schedule. This schedule will ensure that the inserts will not degrade to the point where the drive lugs start driving metal to metal. Once the shaft starts driving metal to metal it will need to be replaced with a complete new shaft, it will not be able to be rebuilt.

Determining Replacement Schedule:

Run for one month - remove inserts and return to Hayes Mfg. for inspection
If OK, run shaft for 2 months - remove inserts and return to Hayes Mfg. for inspection
If OK, run for 3 months and return to Hayes Mfg. for inspection
If OK,keep repeating this schedule, adding 1 month each time, until you are told by Hayes Mfg that you have reached the point of needing to replace inserts.

If you are running multiple Hayes drivelines you will only need to pull one Yellow Jacket Shaft from service to inspect. That way you will only need to wait 1 more month to inspect the 2-month runtime, and so on. If you do not reach the replacement interval and you have inspected all Yellow Jacket Shafts wait an additional month and then inspect the first inspected shaft again. Repeat the original process until replacement schedule is determined.

Caution: At any time if your RPM will not hold constant during test, the inserts have prematurely worn. They will need to be removed and replaced immediately.

Complete Rebuild Schedule:

The customer shall also determine a complete rebuild schedule. After drive shaft has run for 1 year, remove from dyno and inspect u-joints and internal shaft bearings. If bearing have very little play you will be able to re-assemble shaft and continue to run. If you would like to replace the bearings while the shaft is disassembled you may do so, especially if you have other dynos running the same shaft setup. Run shaft for another year before repeating process. Once you notice the bearings getting worn (sloppy or not smooth running) you will want to make note of the service time, and use that as your complete rebuild interval.

About Us:

Hayes Manufacturing is located in the beautiful town of Fife Lake, Michigan. We are a woman -owned, small business and proud to make our products in the USA. Our goal is to be your "one-stop" shop for all your power transmission needs. Contact us today to see how we can help power your success!

WHY CHOOSE HAYES?

Certifications:

- ISO 9001 Quality Standard
- ISO 14001 Enviornmental Standard
- Certified woman-owned (WBENC Cert # 2005127693)
- WOSB Certified

Custom Designs:

Our Engineering Department has the experience and knowledge to evaluate custom designs. Because we offer in-house design services, we can take a project from quote to design to prototype quickly and economically.

Interactive Website:

You can find detailed product information, search for assemblies, print product drawings, search for distributors, place an order and much more on:
www.hayescouplings.com

Satisfied Customers:

The best part of our job! We love it when our customers give us feedback regarding our products and service. We're proud of our reputation and work hard to protect it. See our website for customer testimonials.

Distributor Training Services

We offer web-based training to familiarize your sales staff with our products and service. In-house training is available upon request. Contact us to schedule a personalized training session.

Logistics Assistance:

We ship products worldwide and assist with scheduling shipments to meet your timeline and your budget.

Warranty Information:

For warranty information please visit:
www.hayescouplings.com/pdf/warranty.pdf