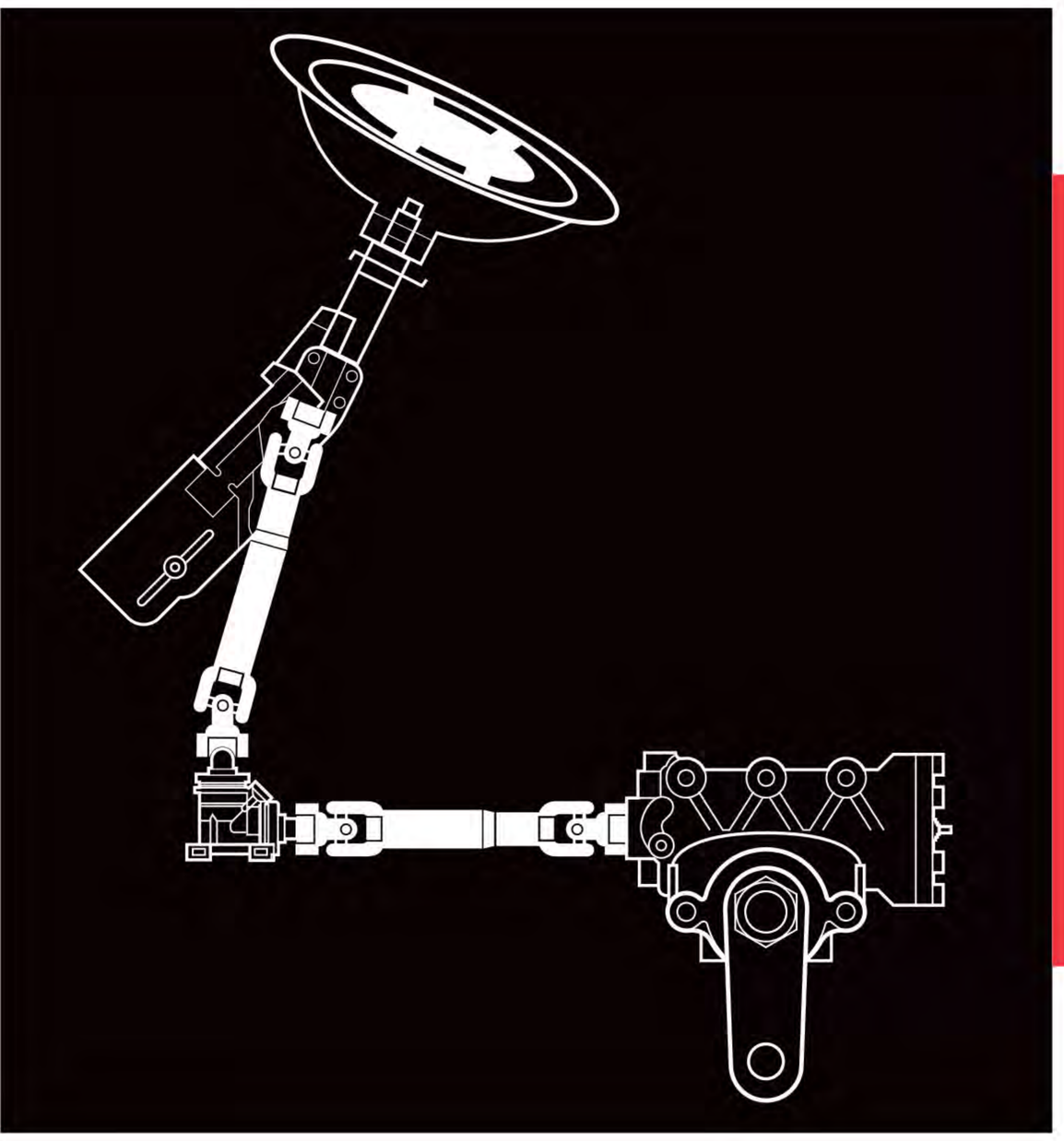
STEERING SHAFTS FOR COMMERCIAL VEHICLES AND RELATED 1000 SERIES PARTS



- Heavy duty for high torque capacity
- Steel design to meet the harshest conditions in the military
- Blue nylon to reduce noise and vibration
- Universal joints are designed to be serviceable
- Fully painted and lubricated

Steering shafts are the connection between the steering gear and the steering column. These shafts are installed in medium duty to heavy-duty commercial vehicles and buses. Through installation of the steering shaft the movement that occurs between the driver's cab and chassis remain without any influence in the steering shaft behavior. Slip moves with the distance variances to compensate for these loads. The overall length of the low-wear components is matched to the vehicle requirements.

RELIABILITY

When You Need it the MOST

MACHINE SERVICE, INC.

INNOVATION THAT DRIVES SUCCESS

Machine Service, Inc. steering shafts are engineered to the highest standards. Our steering shafts provide peak performance, durability and high quality aftermarket/OEM solutions.

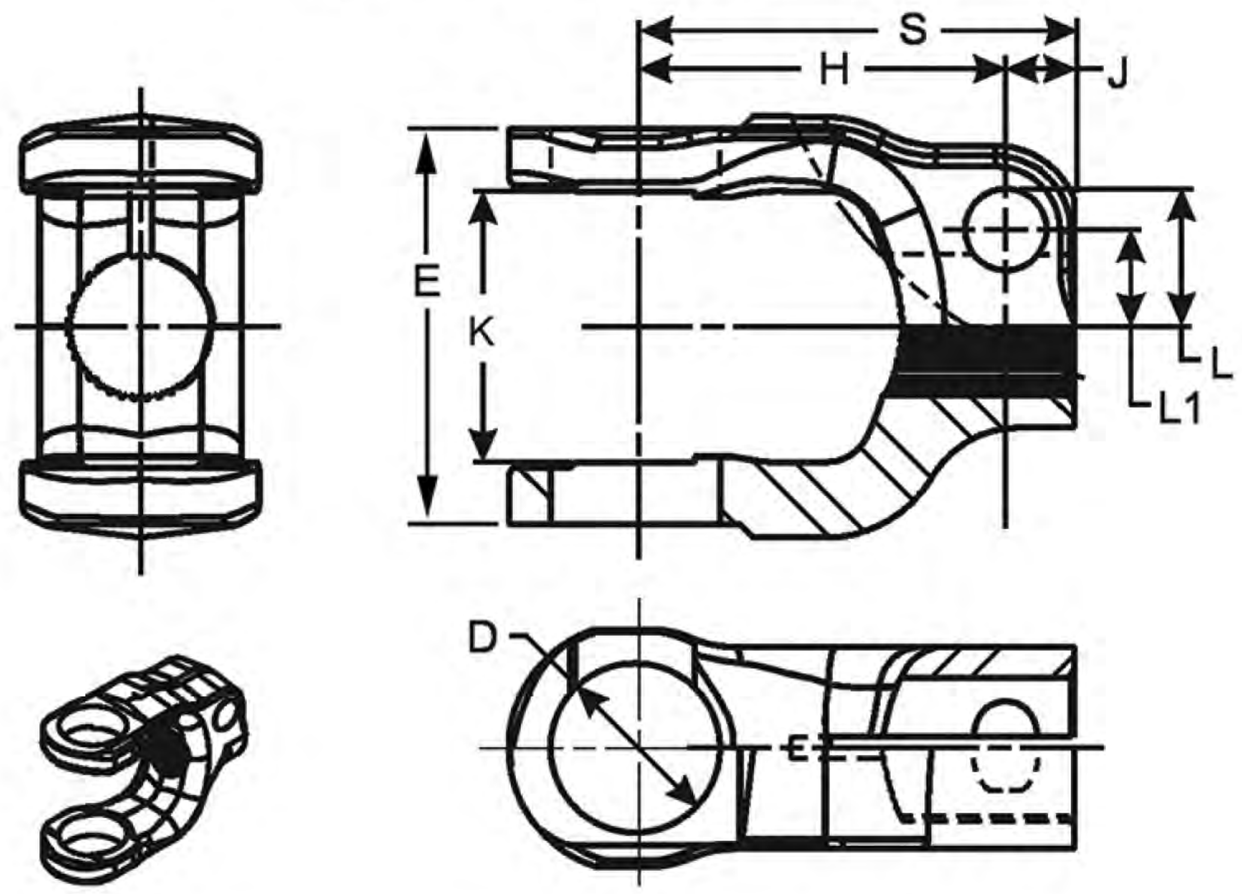
Steering shafts are shipped complete with bolt and shipping lubrication. Proper grease must be filled into the shafts at the time of installation.

Long or short we can engineer a shaft to fit your application. Colors can be flat or gloss black or no paint.

Steering shafts preassembled and welded by our certified team.

Crates can be custom made to meet your storage requirements for ease of inventory control.

STEERING SHAFT SERRATED HOLE
With Snap Ring Design



Serrated Hole		Bolt Hole Diameter	H	J	L	L1	S	End Yoke Part Number
Major Diameter	Minor Diameter (Nominal)		Centerline of U-Joint to Centerline of Bolt Hole	Centerline of Bolt Hole to End of Hub	Centerline of Spline to Top of Bolt Hole	Centerline of Spline to Centerline of Bolt Hole	Centerline of U-joint to End of Hub	
1000ST SERIES (Con't) K=1.500 D=.938								**USE KIT 5-103X**
.870-30 Based On 36 Spline								
.870	.819	.403	2.031	.469	.748	—	2.500	10-4-601SX
.870	.819	.405	2.031	.469	.748	—	2.500	10-4-951SX
							Spot face around bolt hole	
.870	.819	.451	2.031	.530	.789	—	2.280	10-4-1241SX•
.870	.819	.467	2.031	.469	.815	—	2.500	10-4-741SX
.870	.819	.467	2.031	.470	.780	—	2.500	10-4-991SX•
.870	.819	.467	2.031	.470	.787	—	2.500	10-4-461SX
.990-14 Based On 36 Spline								
.990	.947	.451	2.030	.470	.852	—	2.500	10-4-851SX
							Yoke has flat in spline bore	
.994-30 Based On 36 Spline								
.994	.947	.405	1.750	.630	.802	—	2.380	10-4-391SX
.994	.947	.405	1.780	.470	.802	—	2.250	10-4-121SX
.994	.947	.405	1.780	.470	.802	—	2.250	10-4-561SX
.994	.947	.405	2.030	.470	.802	—	2.500	10-4-371SX
.994	.947	.405	2.030	.470	.802	—	2.500	10-4-961SX
.994	.947	.451	2.030	.470	.863	—	2.500	10-4-971SX
.994	.947	.451	2.030	.470	.863	—	2.500	10-4-451SX
.994	.947	.451	4.000	.470	.863	—	4.470	10-4-1201SX
.994	.947	.467	2.030	.470	.835	—	2.500	10-4-731SX
1.006-34 Based On 48 Spline								
1.006	.960	.468	2.030	.470	—	.630	2.500	10-4-661SX
1.014-66 Based On 79 Spline								
1.014	—	.406	1.970	.380	.835	—	2.340	10-4-1131SX
1.014	.975	.438	1.970	.370	.829	—	2.340	10-4-1441M
1310ST SERIES		**E=3.469**	**D=1.062**					**USE KIT 5-251X**
1.000-30 Based On 36 Spline								
1.000	.947	4.500	2.120	.760	—	.610	2.880	2-4-4411SX
1.000-36 Spline								
1.000	.947	.406	2.125	.437	—	.610	2.562	2-4-4461SX

STEERING SHAFT DIMENSIONS (See Drawing 1)

Dimension A - * Required for Application

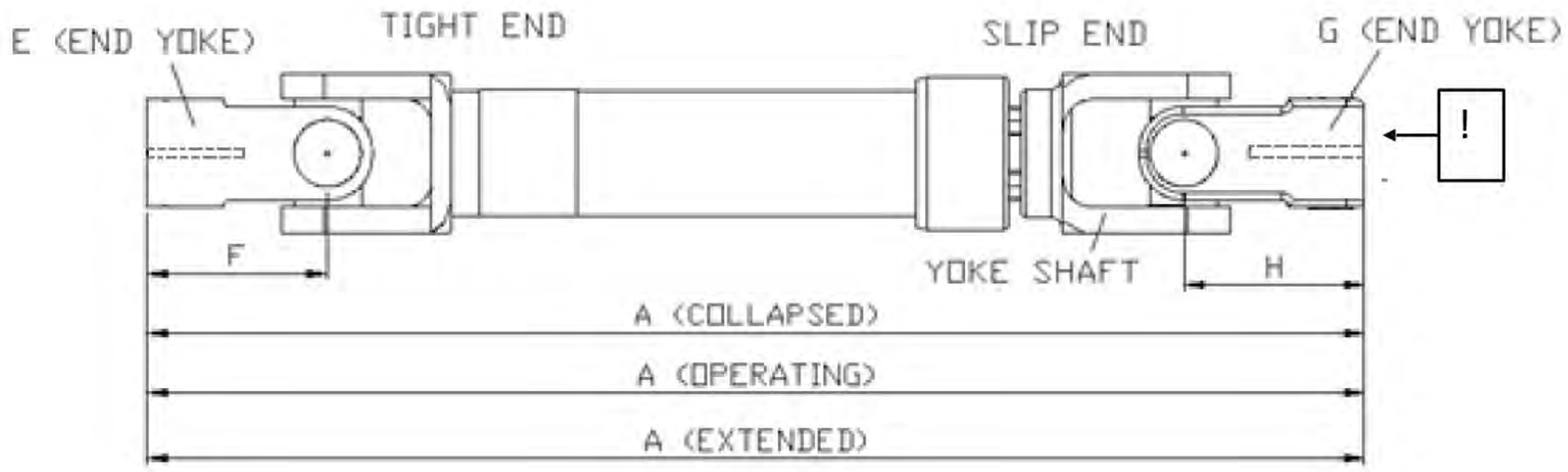
*(End to End) Extended Length = _____

*(End to End) Maximum Operating = _____

*(End to End) Collapsed = _____

Phasing (Y) in degrees (if known) _____ (See Drawing 4)

Drawing 1



Slip End

End Yoke Part Number (G) _____

End Yoke Length (H) _____

If part numbers are not known, attach spline data for the mating output shaft.

Tight End

End Yoke Part Number (E) _____

End Yoke Length (F) _____

If part numbers are not known, attach spline data for the mating output shaft.

Signed _____ Title _____

Phone Number _____ Date _____

MACHINE SERVICE, INC.

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