

BRAKES / FINAL DRIVE Jackshaft Speed VS MPH Chart

INDY JACKSHAFT SPEED VS. MILES PER HOUR SPROCKET COMBINATION/GEAR RATIO/CHAIN PITCH

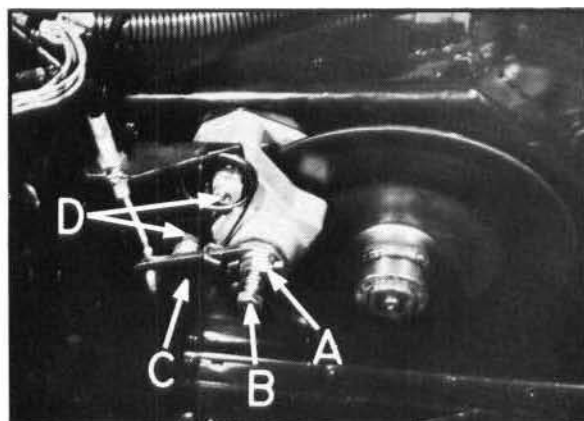
The following chart should be used to select optimum gearing for special applications. The chart is calculated for models with the P85 drive clutch at a 1 to 1 ratio between drive clutch and driven clutch front drive sprocket diameter is 7.06 inches. To use the chart, select the jackshaft rpm's (equal to engine rpm). MPH is shown to the right of jackshaft rpm. Shown on top is optimum gearing for mph and engine rpms.

Jackshaft RPM	23/27	20/33	21/35	20/36	19/35	21/37	21/39	18/36	20/38	20/41	19/40	19/41	18/39	16/35	18/41	17/39	15/35	17/40	17/41	16/38	16/40	14/35	10/41	15/39	15/40	15/41	14/39	14/40	14/41
Pitch	66	64	64	64	64	66	66	64	66	66	62	68	66	62	68	66	62	66	66	64	66	62	66	64	64	66	64	64	64
5500	86.5	83.4	82.4	76.7	74.8	78.2	74.0	70.9	70.6	67.1	66.8	63.7	63.4	62.8	60.4	60.1	59.1	58.6	57.1	56.4	55.1	55.1	53.8	52.9	51.6	50.4	49.3	48.1	47.0
6000	86.8	84.7	83.7	79.9	76.0	79.4	75.1	72.0	71.7	68.2	67.8	64.7	64.4	63.8	61.3	61.0	60.0	59.5	58.0	57.3	55.9	55.9	54.6	53.8	52.3	51.2	50.1	48.9	47.7
6700	88.1	86.0	85.0	81.1	77.1	80.6	76.3	73.1	72.8	69.2	68.9	65.7	65.4	64.8	62.2	62.0	60.9	60.4	58.9	58.1	56.7	56.7	55.4	54.6	53.1	52.0	50.9	49.6	48.4
6800	89.4	87.3	86.2	82.3	78.3	81.8	77.4	74.2	73.8	70.2	69.9	66.7	66.4	65.7	63.2	62.9	61.8	61.3	59.7	59.0	57.6	57.6	56.2	55.4	53.9	52.7	51.6	50.3	49.1
6900	90.8	88.6	87.5	83.5	79.4	83.0	78.6	75.3	74.9	71.3	70.9	67.6	67.3	66.7	64.1	63.8	62.7	62.2	60.6	59.9	58.4	58.4	57.1	56.2	54.7	53.5	52.4	51.1	49.9
7000	92.1	89.8	88.8	84.7	80.6	84.2	79.7	76.4	76.0	72.3	72.0	68.6	68.3	67.7	65.0	64.7	63.6	63.1	61.5	60.7	59.3	59.3	57.9	57.0	55.5	54.3	53.1	51.8	50.6
7100	93.4	91.1	90.0	85.9	81.7	85.4	80.8	77.5	77.1	73.3	73.0	69.6	69.3	68.7	65.9	65.7	64.5	64.0	62.4	61.6	60.1	60.1	58.7	57.8	56.3	55.1	53.9	52.6	51.3
7200	94.7	92.4	91.3	87.1	82.9	86.6	82.0	78.6	78.2	74.4	74.0	70.6	70.3	69.6	66.9	66.6	65.4	64.9	63.3	62.5	61.0	61.0	59.6	58.6	57.1	55.8	54.6	53.3	52.0
7300	96.0	93.7	92.6	88.3	84.0	87.8	83.1	79.7	79.3	75.4	75.0	71.6	71.2	70.5	67.8	67.5	66.3	65.8	64.1	63.4	61.8	61.8	60.4	59.5	57.9	56.6	55.4	54.0	52.8
7400	97.3	95.0	93.8	89.5	85.2	89.0	84.2	80.8	80.4	76.4	76.1	72.5	72.2	71.6	68.7	68.4	67.3	66.7	65.0	64.2	62.7	62.7	61.2	60.3	58.7	57.4	56.2	54.8	53.5
7500	98.6	96.3	95.1	90.8	86.3	90.2	85.4	81.9	81.4	77.5	77.1	73.5	73.2	72.5	69.7	69.4	68.2	67.6	65.9	65.1	63.5	63.5	62.0	61.1	59.5	58.2	56.9	55.5	54.2
7600	100.0	97.5	96.4	92.0	87.5	91.4	86.5	83.0	82.5	78.5	78.1	74.5	74.2	73.5	70.6	70.3	69.1	68.5	66.8	66.0	64.4	64.4	62.9	61.9	60.3	58.9	57.7	56.3	54.9
7700	101.3	98.8	97.6	93.2	88.6	92.6	87.7	84.0	83.6	79.5	79.2	75.5	75.1	74.5	71.5	71.2	70.0	69.4	67.7	66.8	65.2	63.7	62.7	61.1	59.7	58.4	57.0	55.6	54.2
7800	102.6	100.1	98.9	94.4	89.8	93.8	88.8	85.1	84.7	80.6	80.2	76.5	76.1	75.4	72.4	72.1	70.9	70.3	68.5	67.7	66.1	65.1	63.5	61.9	60.5	59.2	57.8	56.4	55.0
7900	103.9	101.4	100.2	95.6	90.9	94.9	89.9	86.2	85.8	81.6	81.2	77.4	77.1	76.4	73.4	73.0	71.8	71.2	69.4	68.6	66.9	65.9	64.3	62.7	61.3	60.0	58.5	57.1	55.7
8000	105.2	102.7	101.4	96.8	92.1	96.3	91.1	87.3	86.9	82.8	82.4	78.4	78.1	77.4	74.4	74.0	72.8	72.1	70.3	69.4	67.8	66.8	65.2	63.4	62.1	60.7	59.2	57.8	56.4
8100	106.5	104.0	102.7	98.0	93.2	97.5	92.2	88.4	88.0	83.7	83.3	79.4	79.0	78.3	75.2	74.9	73.6	73.0	71.2	70.3	68.6	67.6	66.0	64.2	62.8	61.5	60.0	58.5	57.0
8200	107.8	105.2	104.0	99.2	94.4	98.7	93.4	89.5	89.0	84.7	84.3	80.4	80.0	79.3	76.2	75.8	74.5	73.9	72.0	71.2	69.5	68.5	67.0	65.0	63.6	62.2	60.7	59.3	57.8
8300	109.2	106.5	105.2	100.4	95.5	99.9	94.5	90.6	90.1	85.7	85.3	81.4	81.0	80.3	77.1	76.7	75.4	74.8	72.9	72.0	70.3	68.7	67.6	65.8	64.4	63.0	61.5	60.0	58.5
8400	110.5	107.8	106.5	101.6	96.7	101.1	95.6	91.7	91.2	86.8	86.3	82.3	82.0	81.2	78.0	77.7	76.3	75.7	73.8	72.9	71.1	69.5	68.4	66.6	65.2	63.8	62.2	60.7	59.2
8500	111.8	109.1	107.8	102.9	97.8	102.3	96.8	92.8	92.3	87.8	87.4	83.3	82.9	82.2	78.9	78.6	77.2	76.6	74.7	73.8	72.0	70.3	69.2	67.4	65.9	64.5	62.9	61.4	59.9
8600	113.1	110.4	109.0	104.1	99.0	103.5	97.9	93.9	93.4	88.8	88.4	84.3	83.9	83.2	79.9	79.5	78.2	77.5	75.6	74.6	72.8	71.1	70.0	68.2	66.7	65.3	63.7	62.2	60.7
8700	114.4	111.7	110.3	105.3	100.1	104.7	99.0	95.0	94.5	89.9	89.4	85.3	84.9	84.1	80.8	80.4	79.1	78.4	76.4	75.5	73.7	72.0	70.9	69.0	67.5	66.0	64.4	62.9	61.4
8800	115.7	112.9	111.6	106.5	101.3	105.9	100.2	96.1	95.6	90.9	90.5	86.3	85.9	85.1	81.7	81.4	80.0	79.3	77.3	76.4	74.5	72.8	71.7	69.8	68.3	66.8	65.2	63.6	62.1
8900	117.1	114.2	112.9	107.7	102.4	107.1	101.3	97.1	96.6	91.9	91.5	87.2	86.8	86.1	82.7	82.3	80.9	80.2	78.2	77.2	75.4	74.5	72.6	71.5	70.0	68.5	66.9	65.3	63.7
9000	118.4	115.5	114.1	108.9	103.6	108.5	102.5	98.2	97.7	93.0	92.5	88.2	87.8	87.0	83.6	83.2	81.8	81.1	79.1	78.1	76.2	74.4	73.3	71.4	69.8	68.3	66.7	65.0	63.4
9100	119.7	116.8	115.4	110.1	104.7	109.5	103.5	99.3	98.8	94.0	93.5	89.2	88.8	88.0	84.5	84.1	82.7	82.0	80.0	79.0	77.1	75.3	74.1	72.2	70.6	69.1	67.4	65.8	64.2
9200	121.0	118.1	116.7	111.3	105.9	110.7	104.7	100.4	99.9	95.0	94.5	90.2	89.8	89.0	85.4	85.1	83.6	82.9	80.8	79.8	77.9	76.1	74.9	73.0	71.4	69.8	68.1	66.5	64.9
9300	122.3	119.4	117.8	112.5	107.0	111.9	105.9	101.5	101.0	96.1	95.6	91.2	90.8	90.0	86.4	86.0	84.5	83.8	81.7	80.7	78.8	76.9	75.7	73.8	72.1	70.6	68.9	67.2	65.6
9400	123.6	120.6	119.2	113.7	108.2	113.1	107.0	102.6	102.1	97.1	96.6	92.2	91.7	90.9	87.3	86.9	85.4	84.7	82.6	81.6	79.6	77.8	76.6	74.5	72.9	71.3	69.6	67.9	66.3
9500	124.9	121.9	120.5	115.0	109.3	114.3	108.2	103.7	103.2	98.1	97.7	93.3	92.7	91.9	88.2	87.8	86.3	85.6	83.5	82.4	80.5	78.6	77.4	75.3	73.7	72.1	70.3	68.7	67.0
9600	126.3	123.2	121.7	116.2	110.5	115.5	109.3	104.8	104.2	99.2	98.7	94.1	93.7	92.8	89.1	88.7	87.2	86.5	84.3	83.3	81.3	79.4	78.2	76.1	74.5	72.8	71.1	69.4	67.7
9700	127.6	124.5	123.0	117.4	111.6	116.7	110.4	105.9	105.3	100.2	99.7	95.1	94.7	93.8	90.1	89.7	88.2	87.4	85.2	84.2	82.2	80.2	78.6	76.9	75.2	73.6	71.8	70.1	68.4
9800	128.9	125.8	124.3	118.6	112.8	117.9	111.6	107.0	106.4	101.2	100.7	96.1	95.6	94.8	91.0	90.6	89.1	88.3	86.1	85.0	83.0	81.1	79.5	77.7	76.0	74.4	72.6	70.8	69.1
9900	130.2	127.1	125.5	119.8	113.9	119.1	112.7	108.1	107.5	102.3	101.8	97.1	96.6	95.7	91.9	91.5	90.0	89.2	87.0	85.9	83.9	81.9	80.3	78.5	76.8	75.1	73.3	71.5	69.7
10000	131.5	128.3	126.6	121.0	115.1	120.3	113.6	108.2	108.6	103.3	102.8	98.0	97.6	96.7	92.9	92.5	90.9	90.1	87.9	86.8	84.7	82.7	81.4	79.3	77.6	75.9	74.0	72.3	70.5

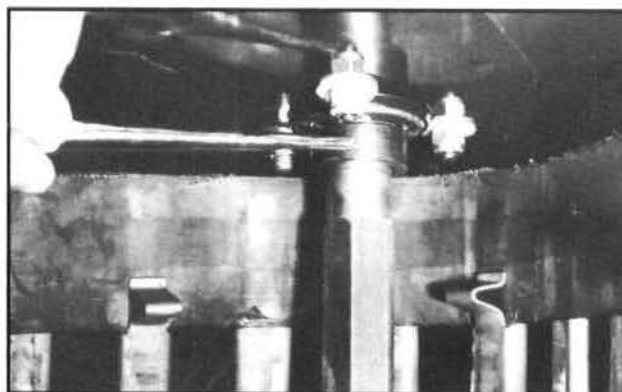
BRAKES / FINAL DRIVE

Type 1 Drive System Overhaul

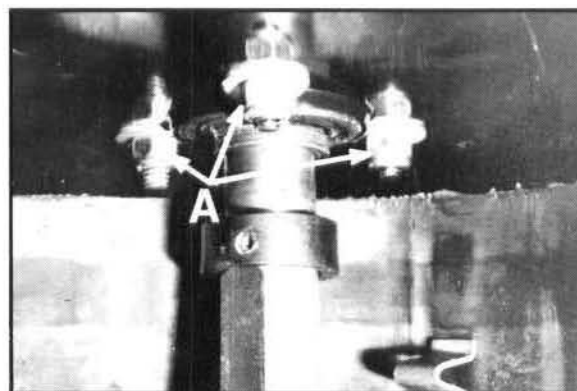
1. Remove drive belt, driven clutch and driven clutch spacer washers.
2. Open adjuster bolt jam nut locking tab (A). Loosen jam nut and remove adjuster bolt (B).
3. Remove actuating lever (C) and return spring.
4. Remove two brake caliper attaching nuts (D).
5. Remove cable bracket and caliper assembly. Check cable condition at both ends. Frayed or binding brake cables must be replaced.



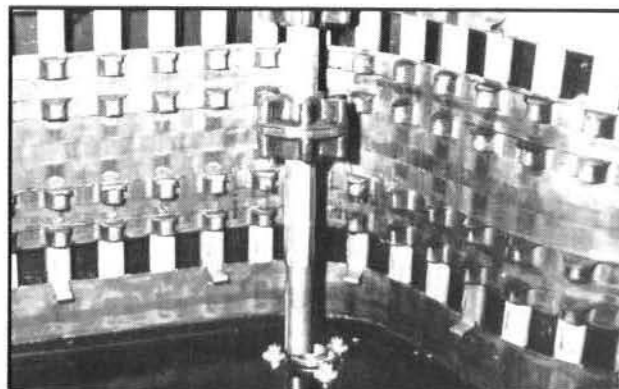
6. Slide brake disc off front drive shaft and remove half moon key.
7. Remove four suspension mounting bolts and suspension. Note placement of two rear torque arm idler wheel thrust spacers for reassembly.
8. Loosen lock collar Allen head set screw. With a punch and hammer, loosen bearing lock collar located on brake end of drive shaft.



9. Remove three flangette attaching bolts (A).
NOTE: The longest of these bolts attaches the stationary brake pad.



10. Slide drive shaft toward brake side of chassis until driven clutch end is free. Tilt shaft and remove it from brake end bearing.
11. Remove track.



BRAKES / FINAL DRIVE Type 1 Drive System Overhaul

12. Before reassembly check drive shaft, drive shaft sprocket, and drive shaft bearings. Replace if necessary.
13. Reverse disassembly procedures to reassemble. Sprocket or drive shaft centering is controlled by the hex portion of drive shaft (A) being bottomed on driven clutch side bearing (B). **NOTE:** Driven clutch must be installed and torqued before lock collar is tightened.
14. Refer to brake adjustment procedures in this chapter.

