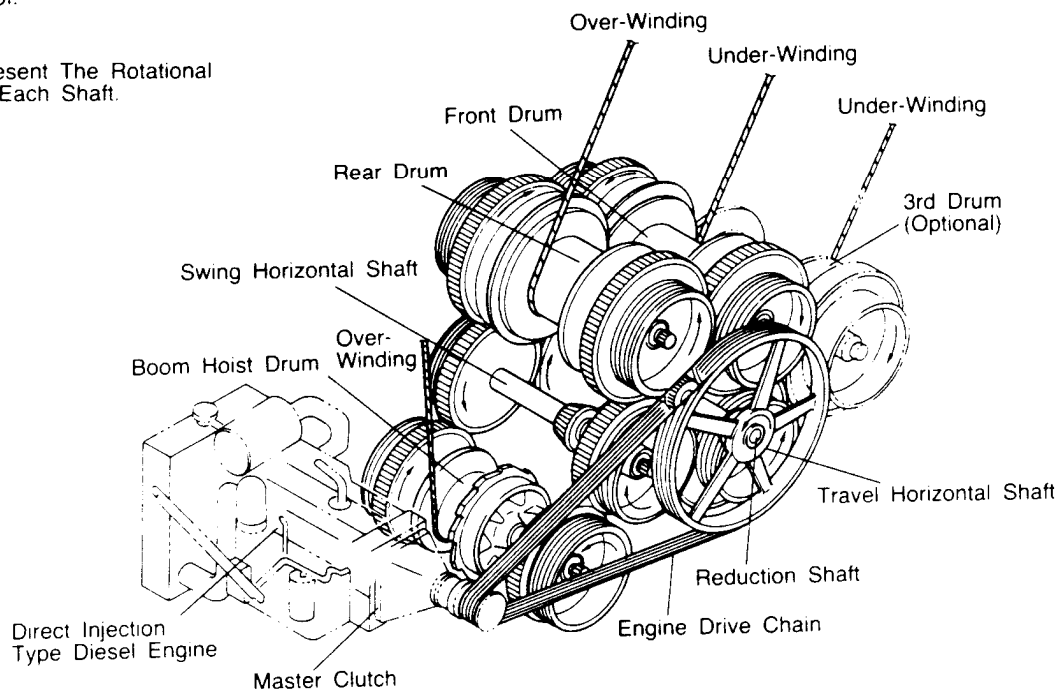


The power torque generated at the engine is transmitted to various mechanisms for hoist, boom hoist, swing, travel, etc. The power torque is transmitted to the various mechanisms through the master clutch in the construction as illustrated.

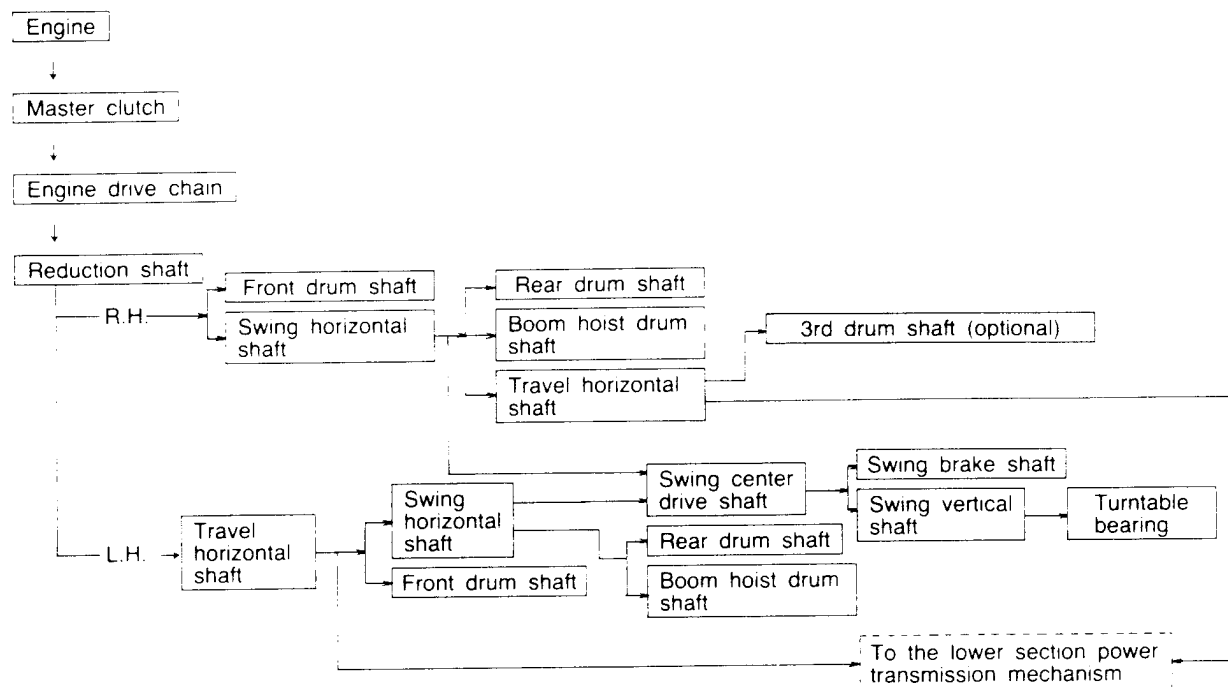
The power to the working devices is turned on and off by a hydraulic Speed-O-Matic system which features finger control.

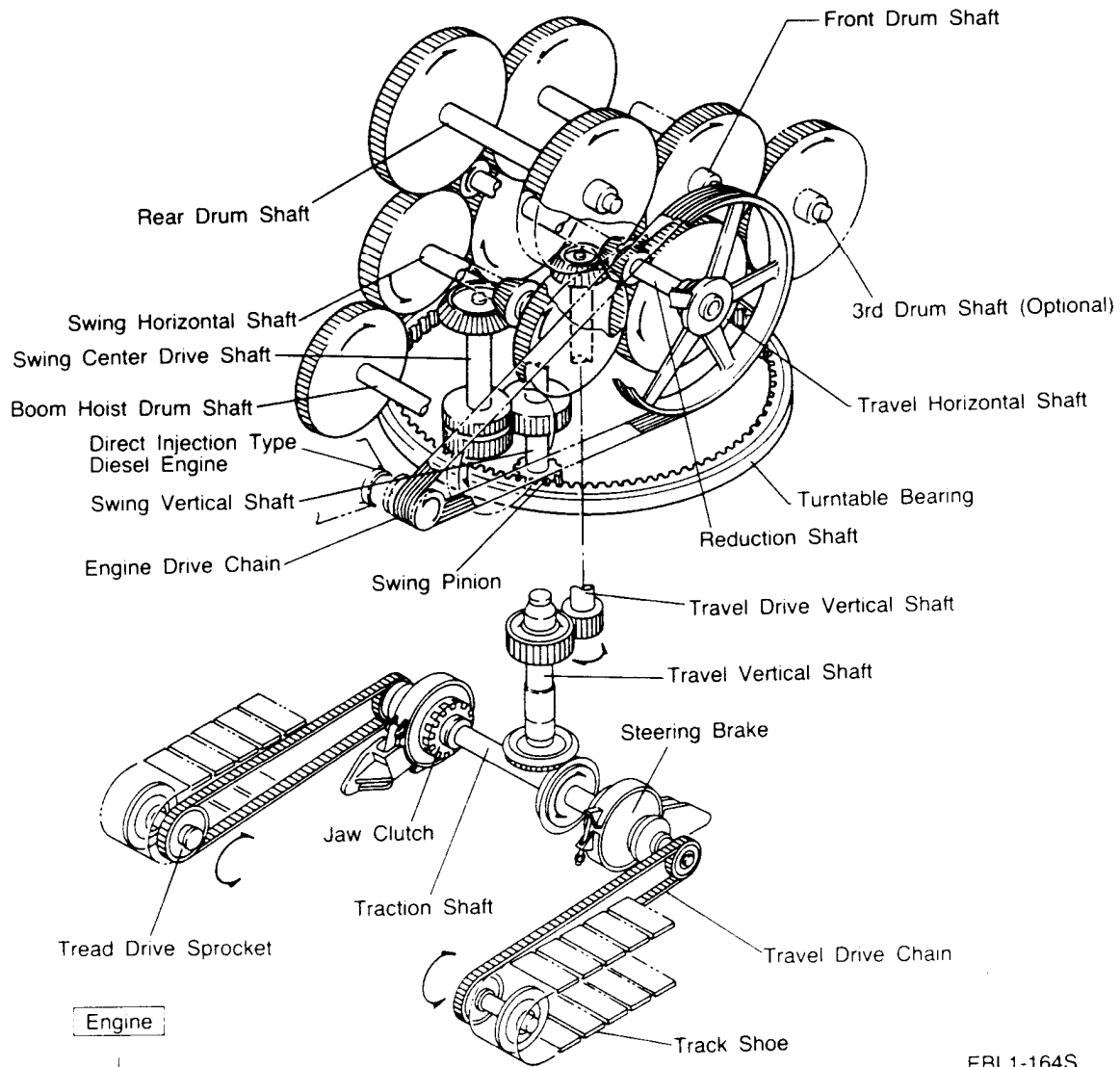
Arrows Represent The Rotational Direction Of Each Shaft.



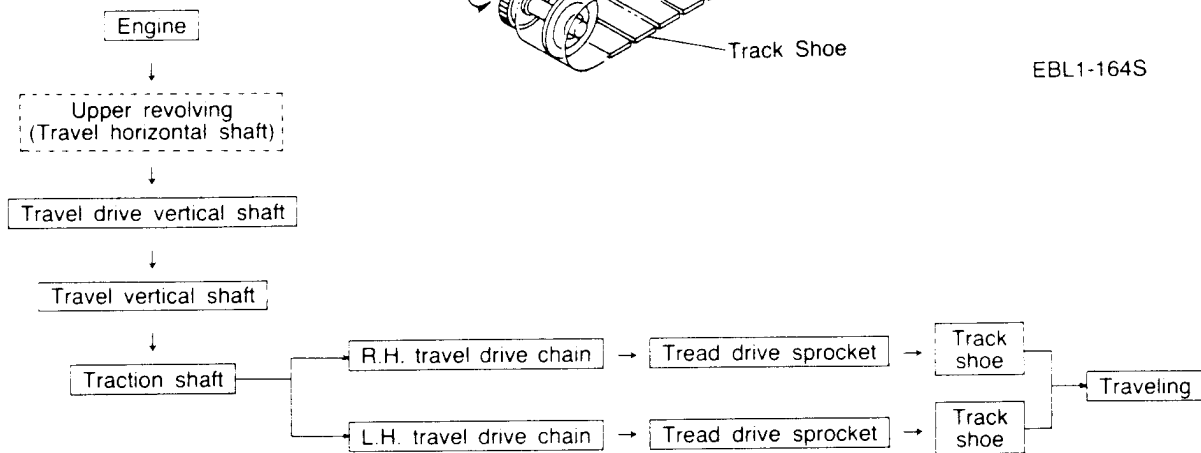
EBL0-6

The power is transmitted as follows:





EBL1-164S



Unit: inch (mm)

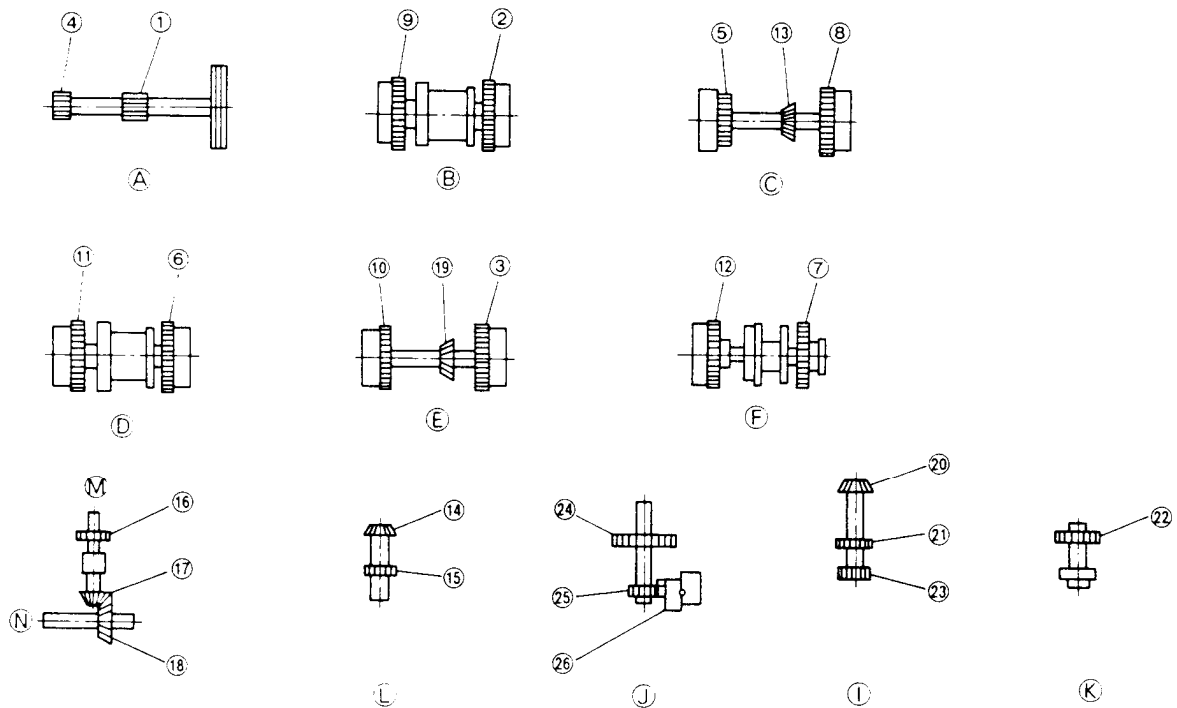
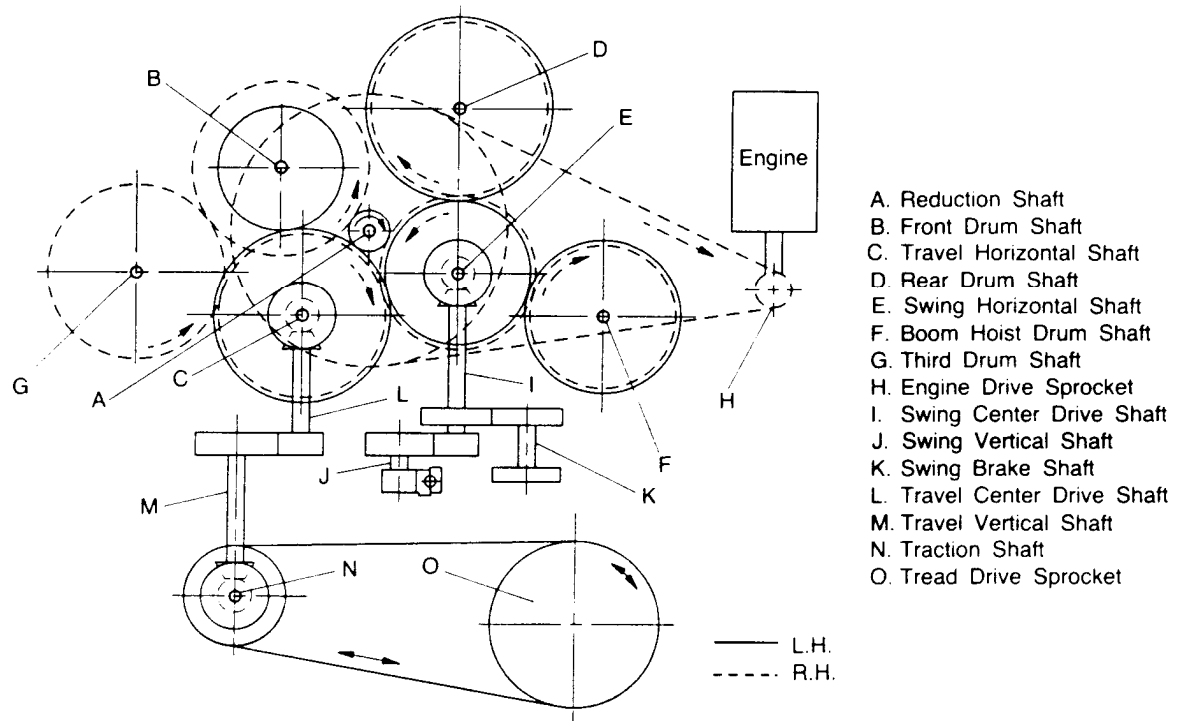
Item	Part Name	Number Of Teeth	*1	Allowable Back-Lash	Treatment
1	Pinion	3	.772" (19.6)	.063" (1.6)	Replacement
2	Spur gear	10	10.79" (274)		
1	Pinion	3	.772" (19.6)	.059" (1.5)	Replacement
3	Spur gear	9	8.646" (219.6)		
4	Pinion	3	.772" (19.6)	.063" (1.6)	Replacement
5	Spur gear	10	10.79" (274)		
3	Spur gear	9	8.646" (219.6)	.075" (1.9)	Replacement
6	Spur gear	10	10.79" (274)		
3	Spur gear	9	8.646" (219.6)	.075" (1.9)	Replacement
7	Spur gear	9	8.61" (218.7)		
3	Spur gear	9	8.646" (219.6)	.075" (1.9)	Replacement
8	Spur gear	10	10.79" (274)		
5	Spur gear	10	10.79" (274)	.075" (1.9)	Replacement
9	Spur gear	8	6.702" (170.4)		
5	Spur gear	10	10.79" (274)	.075" (1.9)	Replacement
10	Spur gear	9	8.61" (218.7)		
10	Spur gear	9	8.61" (218.7)	.079" (2.0)	Replacement
11	Spur gear	11	13.17" (334.4)		
10	Spur gear	9	8.61" (218.7)	.098" (2.5)	Replacement
12	Spur gear	9	8.646" (219.6)		
13	Bevel gear	1	.528" (13.4)	.118" (3.0)	Replacement
14	Bevel gear	1	.528" (13.4)		
15	Spur gear	3	.744" (18.9)	.075" (1.9)	Replacement
16	Spur gear	4	1.339" (34)		
17	Bevel gear	1	.531" (13.5)	.118" (3.0)	Replacement
18	Bevel gear	1	.531" (13.5)		
19	Bevel gear	1	.551" (14.0)	.118" (3.0)	Replacement
20	Bevel gear	1	.551" (14.0)		

\*1 Allowable Displacement Over A Given Number Of Teeth

Unit: inch (mm)

Item	Part Name	Number Of Teeth	*1	Allowable Back-Lash	Treatment
21	Spur gear	3	9.047" (229.8)	.083" (2.1)	Replacement
22	Spur gear	4	12.614" (320.4)		
23	Spur gear	3	.709" (18.0)	.087" (2.2)	Replacement
24	Spur gear	4	1.339" (34)		
25	Pinion	2	.26" (6.6)	.091" (2.3)	Replacement
26	Turntable Bearing	11	12.69" (322.3)		

## •Independent

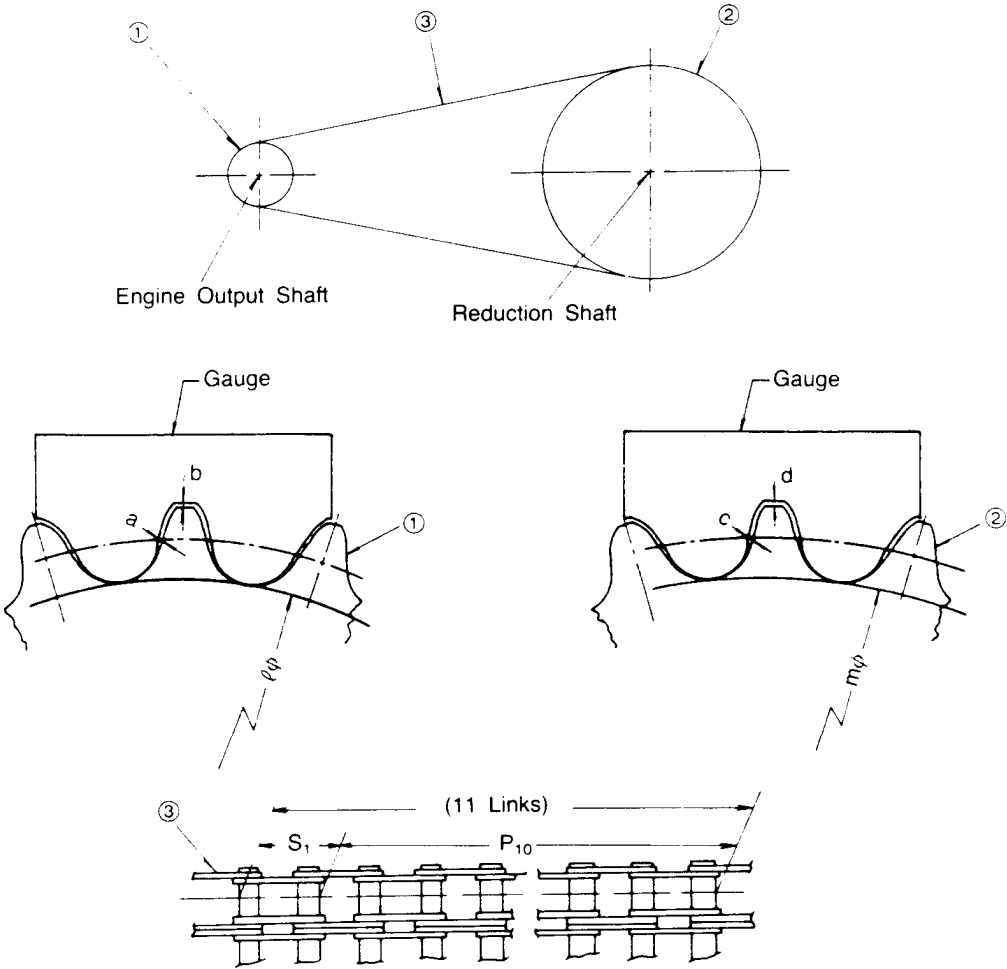




Unit: inch (mm)

Item	Part Name	Mark	Nominal Dimension	Allowable Dimension	Treatment · Note
1	Drive sprocket	a	0	.079" (2)	Replacement or welding repair Gauge No. BLP2014
		b	0	.079" (2)	
		ℓ	4.802" (121.96)	4.724" (120.0)	
2	Drive sprocket	c	0	.079" (2)	Replacement or welding repair Gauge No. BLP2016
		d	0	.079" (2)	
		m	37.97" (964.44)	37.89" (962.5)	
3	Chain	P <sub>10</sub> *	—	7.614" (193.4)	Replacement

[Att.] P<sub>10</sub>\*=S<sub>11</sub>−S<sub>1</sub>



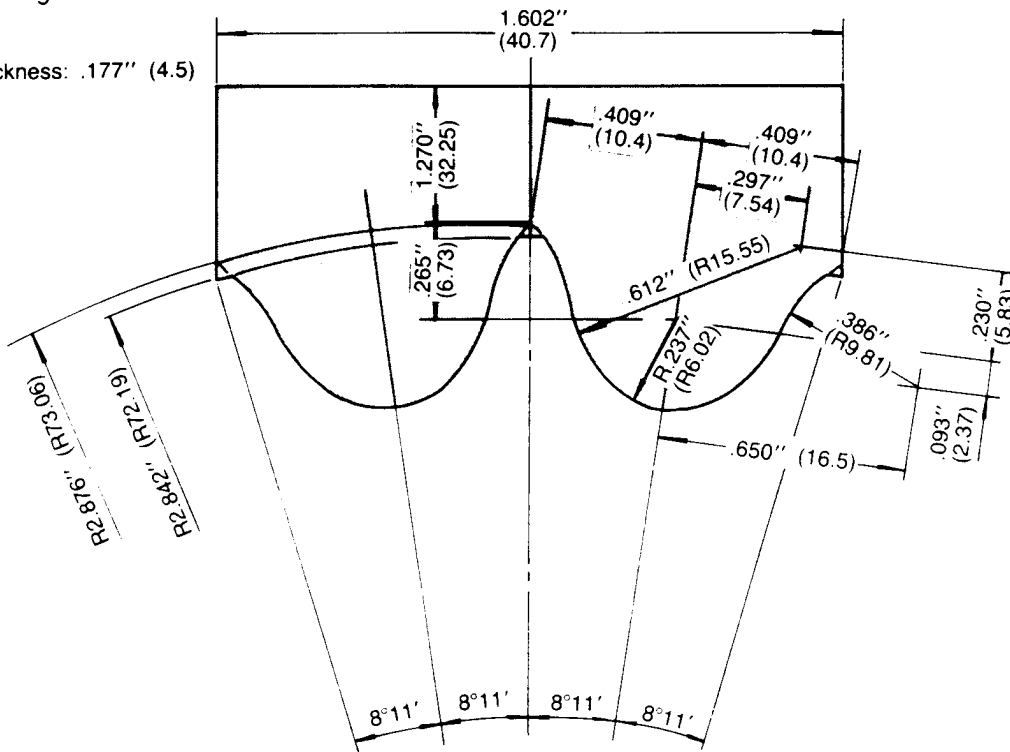
[Att:] Stretch The Chain

## Gauge For Drive Sprocket

Unit: inch (mm)

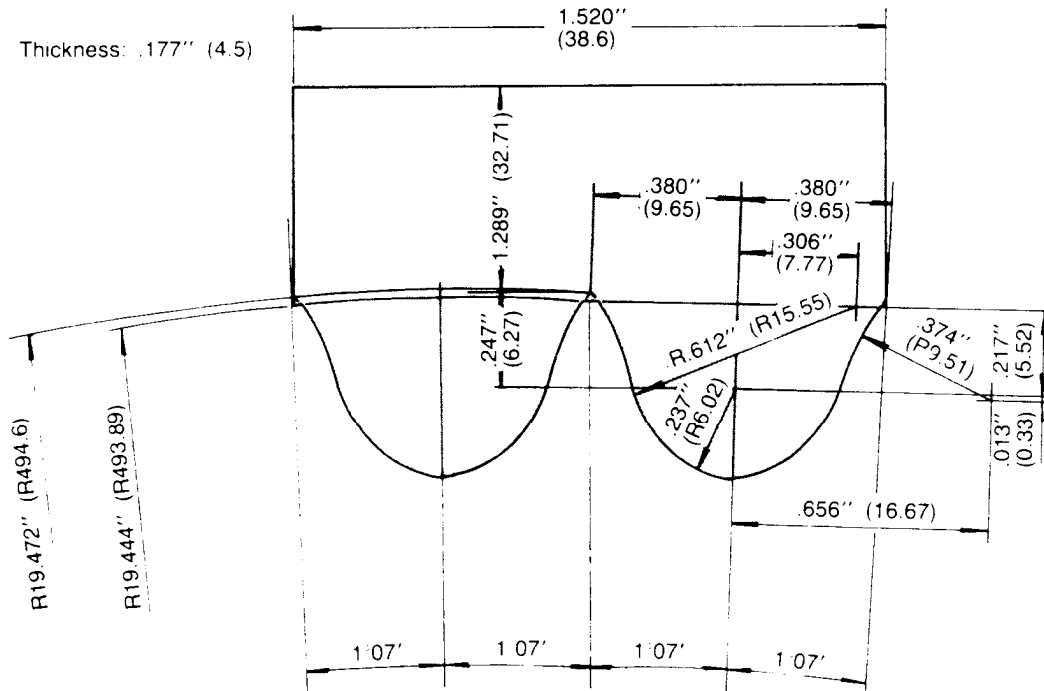
## 1) Gauge No. BLP2014

Thickness: .177" (4.5)



## 2) Gauge No. BLP2016

Thickness: .177" (4.5)





Chain tension must be continuously maintained within the proper range. If excessively slack, the chain is liable to ride up on the sprocket teeth and go off the sprocket or ramble. If too tight, the chain links will be elongated. In both cases, the chain wheel and the sprocket pinion will rapidly wear.

Further, unless the chain wheel and the sprocket pinion are aligned in a straight line, eccentric load is applied to the chain, chain wheel, and sprocket pinion, causing eccentric wear, shortening their lives substantially.

#### 1 Inspection

- 1) Run the engine, and check the chain for strange noises caused by excessive slack or other irregularities.

If any irregularities are found, remove the chain case and inspect the chain.

(Refer to ES1-8-6000 in this manual.)

- 2) Check whether the chain's sag is within the proper range between the engraved upper and lower lines on the inspection window. If the chain is so loose that its center exceeds the red line, adjust the chain tension.

Note: The maximum sag of the chain at this time exceeds .59" (15mm).

- 3) Check the chain connection parts for damage, wear or looseness.

- 4) Check the chain for cracks, elongation, deformation, and other damage.

Further, if the chain is damaged, other associated parts must also be considered damaged, so that the entire chain assembly must be replaced. Though the damaged part may be repaired as an emergency remedy, the entire assembly must be replaced at the earliest convenience.

- 5) Chain elongation amount

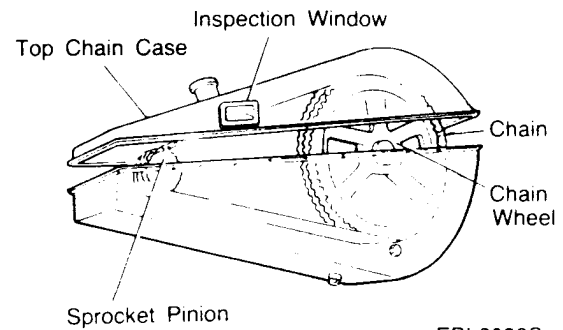
The chain length is measured with the chain tension properly adjusted.

Select eleven links, and measure the distance (S11) between the outsides of the 11 rollers and the outer diameter (S1) of the roller. The result obtained by subtracting (S1) from (S11) becomes 10 times (P10) the roller pitch.

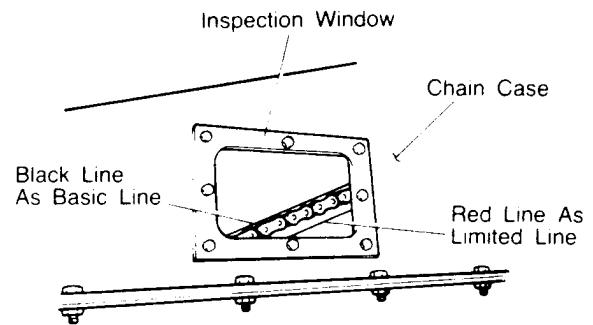
Compare the result (P10) with the reference value listed in ES1-7-2000 in this manual. Replace the chain if the usable limit has been exceeded.

- 6) Check the chain for lubrication.

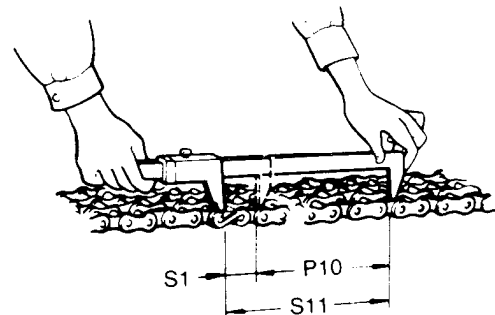
- 7) If any irregularities are found, repair the chain.



EBL2039S



EBL2040S



EBK7S

[Att.] Stretch The Chain.  
 $P_{10} = S_{11} - S_1$

## 2 Chain Tension Adjustment

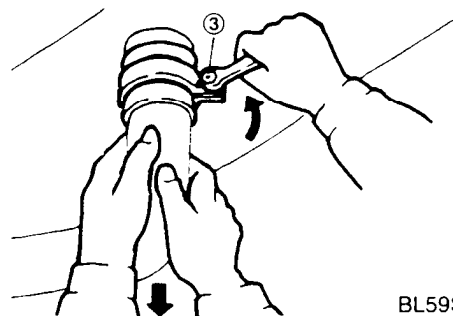
The chain tension is adjusted by sliding the engine frame.

### 2.1 Top chain case removal

(Refer to ES1-8-6029.0 in this manual.)

### 2.2 Engine frame movement

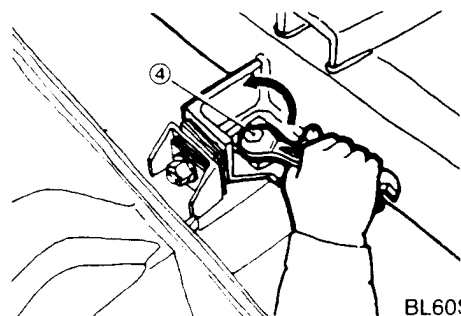
- 1) Remove engine muffler connecting bolt ③ for separation.



BL59S

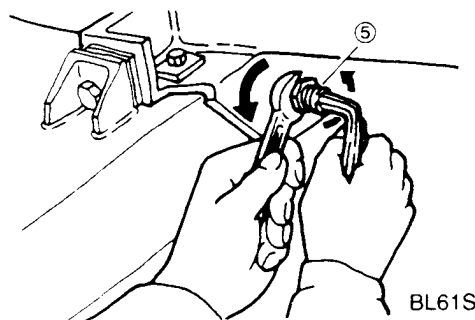
- 2) Loosen the four engine frame fixing bolts ④.

Note: For easier adjustment, elongated holes are provided. The bolts need not be removed.



BL60S

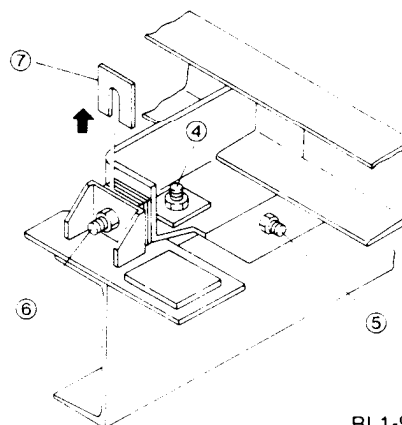
- 3) Evenly loosen two bolts on one side among the four left and right bolts ⑤. This eliminates the necessity for centering after tension adjustment.



BL61S

- 4) Loosen the four shim adjusting bolts ⑥ on the engine frame. Slightly push the engine frame forward and remove shim ⑦ from the rear of the engine frame.

- 5) Evenly tighten the left and right bolts ⑥ on the rear of the engine frame to pull the engine frame backward.



BL1-94S

## **CAUTION**

Do Not Overtighten Or Chain May Be Damaged.