



SERVICE DATA

POWER PRUNER

ECHO: PPT-2620ES/HES

shindaiwa: PT262S

(Serial number : 37000001 and after)

(Serial number : 38000001 and after)

INTRODUCTION

We are constantly working on technical improvement of our products. For this reason, technical data, equipment and design are subject to change without notice. All specifications and directions in this SERVICE DATA are based on the latest product information available at the time of publication.

SERVICE MANUAL Ref. No. 402-43 (Model: SRM-2620ES, SRM-2620TES, T262XS, C262S, T262TXS and C262TS) contains lots of information for servicing these models.

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Reference No. 17-25D-02

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1 SERVICE INFORMATION

1-1 Specifications

Models		PPT-2620ES, PT262S	PPT-2620HES	
Dimensions*	Length	2423 (95.4)		
		Extended: 3411 (134.3)		
	mm (in)			
	Width	273 (10.7)		
	mm (in)			
	Height	260 (10.2)		
	mm (in)			
Dry weight*	kg (lb)	7.9 (17.4)	7.7 (17.0)	
Engine	Type	YAMABIKO, air-cooled, two-stroke, single cylinder		
	Rotation	Counterclockwise as viewed from the output end		
	Displacement	cm ³ (in ³)	25.4 (1.550)	
	Bore	mm (in)	34.0 (1.339)	
	Stroke	mm (in)	28.0 (1.102)	
	Compression ratio		7.6	
Carburetor	Type	Diaphragm, horizontal-draft with purge bulb		
	Model	WALBRO WYG-9		
	Venturi size - Throttle bore	mm (in)	10.5 - 10.5 (0.413 - 0.413)	
Ignition	Type	CDI (Capacitor discharge ignition) system, Digital magneto		
	Spark plug	NGK CMR7H		
Exhaust	Muffler type	Spark arrester muffler with catalyst		
Starter	Type	ES (Effortless-Start) / S (Soft-start)		
	Rope diameter x length	mm (in)	3.5 x 850 (0.14 x 33.5)	
Fuel**	Type***	Mixed two-stroke fuel		
	Mixture ratio	50 : 1 (2%)		
	Gasoline	Minimum 89 octane		
	Two-stroke engine oil	ISO-L-EGD (ISO/CD13738), JASO FC/FD		
	Tank capacity	L (U.S.fl.oz.)	Full tank capacity: 0.6 (20.3) Usable tank capacity: 0.52 (17.6)	
Clutch	Type	Centrifugal, 2-shoe pivot		
Handle	Type	Right hand grip with throttle trigger and throttle trigger lockout		
Gear case	Reduction ratio	1.53		
	Gear tooth	Spiral bevel gear		
	Lubrication	Lithium based grease		
Guide bar / Saw chain lubrication type		Adjustable automatic oil pump		
Oil	Tank capacity	L (U.S.fl.oz.)	0.20 (6.8)	
Sprocket	Type	Spur		
	Number of teeth	6		
	Pitch	in	3/8	

* Without chain and bar ** Refer to Operator's manual.

*** Premixed alkylate fuel for 2-stroke can be used.

1-1 Specifications (Continued)

Cutting devices			Sprocket nose bar
Guide bar	Type		12A0CD3744
	Called length	cm (in)	30.5 (12)
	Gauge	in	0.050
Saw chain	Type		OREGON 91VXL
	Number of drive links		44
	Pitch	in	3/8
	Gauge	in	0.050

Drive shaft and Housing (Main pipe)				
Drive shaft	Type		Aluminum Extrusion	
	Upper	OD - ID	mm (in)	15.0 - 9.9 (0.59 - 0.39)
		Length	mm (in)	1520 (59.8)
	Lower	Length	mm (in)	1543 (60.8)
Housing	Type	Upper / Lower	Aluminium / Fiberglass	
	Upper	OD - ID	mm (in)	34.7 - 32.3 (1.37 - 1.27)
		Length	mm (in)	1524 (60)
	Lower	OD - ID	mm (in)	44.5 - 39.0 (1.75 - 1.54)
		Length	mm (in)	1416 (55.7)
	Front handle fixed pipe	Type		Aluminium
Upper		OD - ID	mm (in)	25 - 22 (0.98 - 0.87)
		Length	mm (in)	454 (17.9)
Drive shaft		Type		Flexible shaft
		Inner shaft:	Diameter	mm (in)
Length			mm (in)	503 (19.8)

OD: Outer diameter **ID:** Inner diameter

1-2 Technical data

Engine			
Compression pressure	MPa (kgf/cm ²) (psi)		0.97 (9.8) (140)
Clutch engagement speed	r/min		4,310
Ignition system			
Spark plug gap	mm(in)		0.6 - 0.7 (0.024 - 0.028)
Spark test	Tester gap w/ spark plug	mm(in)	4.0 (0.16)
	Tester gap w/o spark plug	mm(in)	6.0 (0.24)
Secondary coil resistance	Ω		780 - 1180
Pole shoe air gaps	mm(in)		0.3 - 0.4 (0.012 - 0.016)
Ignition timing	at 2,900 r/min	°BTDC	9
	at 6,500 r/min	°BTDC	22
	at 8,500 r/min	°BTDC	33
	at 11,000 r/min	°BTDC	19
Carburetor			
Test Pressure, minimum	MPa (kgf/cm ²) (psi)		0.05 (0.5) (7.0)
Metering lever height	mm(in)		0.66 (0.03) lower than diaphragm seat
Tool to adjust mixture needles			D-shaped tool (S) P/N X645-000022
Carburetor adjustment			
Cutting head preparation			Install P/N 91156 Load adapter. (210mm, 4pcs) NOTE: Refer to "2-1 Installing Load adapter" on Page 8 for the details.
1) Initial setting	H mixture needle	turn out	3
	L mixture needle	turn in ^{*1}	7 1/4
	Throttle adjust screw	turn out ^{*2}	7 3/4
Engine warm-up	Idle - WOT : Total	sec.	10 - 50 : 180
			NOTE: When accelerating to WOT, take care to prevent the nylon lines from damage by guide bar bolts.
2) Find idle maximum speed			Adjust L mixture needle to maximum idle speed ^{*3}
3) Set idle maximum speed w/ TAS		r/min	4,000
4) Set idle speed by turning L mixture needle CCW		r/min	3,000
5) Confirm maximum WOT speed			Confirm maximum WOT speed just before the max. WOT speed drops, turning H mixture needle CW. Maximum WOT speed: approx. 8,500 r/min If the WOT speed does not obtain above speed, adjust nylon line length.
6) WOT setting		r/min	Turn H mixture needle CCW to reduce WOT speed by : 20 - 30
7) Verify final engine speed with standard guide bar and saw chain		r/min	Idle: 2,700 - 3,500 WOT: 11,130 - 11,370
8) Verify clutch engagement speed			Confirm clutch engagement speed. If it is less than 1.25 times the idle speed, adjust the idle speed by turning TAS CCW.
Chain oil discharge volume at 7,000 r/min		mL/min(UK.fl.oz./min)	Adjustable: 1.5 - 13 (0.05 - 0.46) (Factory set: 4.5 mL/min)

BTDC: Before top dead center. **WOT:** Wide open throttle **CCW:** Counterclockwise **TAS:** Throttle adjust screw

^{*1} Screw in L mixture needle from initial thread engagement (at the point that the clicking sound is heard).

^{*2} Turn TAS clockwise until its head touches boss. Then turn TAS Counterclockwise.

^{*3} If clutch engages during adjustment process 2), reduce engine speed by turning TAS CCW until clutch disengages and then redo 2).

1-3 Torque limits

Descriptions		Size	kgf•cm	N•m	in•lbf	
Starter system	Starter pawl assembly	M8	70 - 110	7 - 11	60 - 95	
	Starter case	M5	40 - 60	4 - 6	35 - 55	
Ignition system	Magneto rotor (Flywheel)	M8	160 - 200	16 - 20	140 - 175	
	Ignition coil	M5	40 - 60	4 - 6	35 - 55	
	Fan cover	M5	50 - 70	5 - 7	45 - 60	
	Spark plug	M10	100 - 150	10 - 15	87 - 130	
Fuel system	Carburetor	M5	30 - 45	3 - 4.5	25 - 40	
	Intake insulator	M5	30 - 45	3 - 4.5	25 - 40	
	Fuel tank with stand	Starter side	M5*	40 - 60	4 - 6	35 - 55
		Fan cover side	M5*	50 - 70	5 - 7	45 - 60
Clutch	Clutch shoe	M6	70 - 110	7 - 11	60 - 95	
Cylinder cover		M5*	30 - 45	3 - 4.5	25 - 40	
Engine	Crankcase	M5	70 - 110	7 - 11	60 - 95	
	Cylinder	M5	70 - 110	7 - 11	60 - 95	
	Muffler	M5	70 - 110	7 - 11	60 - 95	
	Muffler cover	Starter side	M5*	25 35	2.5 3.5	22 30
		Crankcase side	M5*	30 - 45	3 - 4.5	25 - 40
Other	Front handle [†]	M5**	20 - 30	2 - 3	17 - 25	
	Main pipe	Engine side	M5	30 - 40	3 - 4	25 - 35
		Gear case side	M5	27 - 37	2.7 3.7	23 - 32
	Auto oiler	M5	27 - 37	2.7 3.7	23 - 32	
	Gear case	M5	27 - 37	2.7 3.7	23 - 32	
	Guide bar nut	M6	90 - 130	9 - 13	80 - 110	
	Oil tank	M5	27 - 37	2.7 3.7	23 - 32	
Regular bolt, nut and screw		M3	6 - 10	0.6 - 1	5 - 9	
		M4	15 - 25	1.5 - 2.5	13 - 22	
		M5	25 - 45	2.5 - 4.5	22 - 40	
		M6	45 - 75	4.5 - 7.5	40 - 65	
		M8	110 - 150	11 - 15	95 - 130	

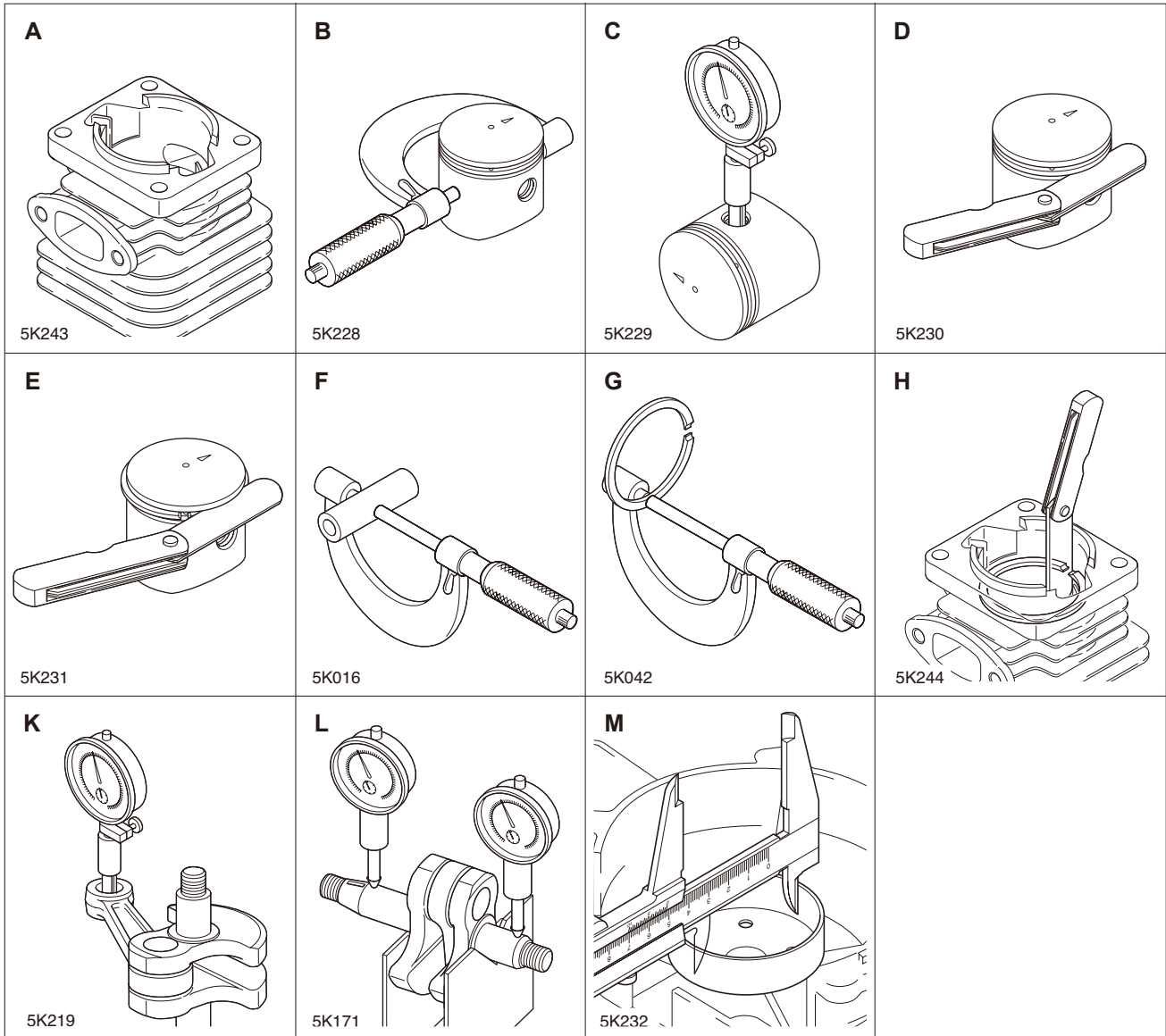
LM: Left hand thread * Apply thread locking sealant. (See below) ** Tapping screw

[†] For PPT-2620ES and PT262S

1-4 Special maintenance materials

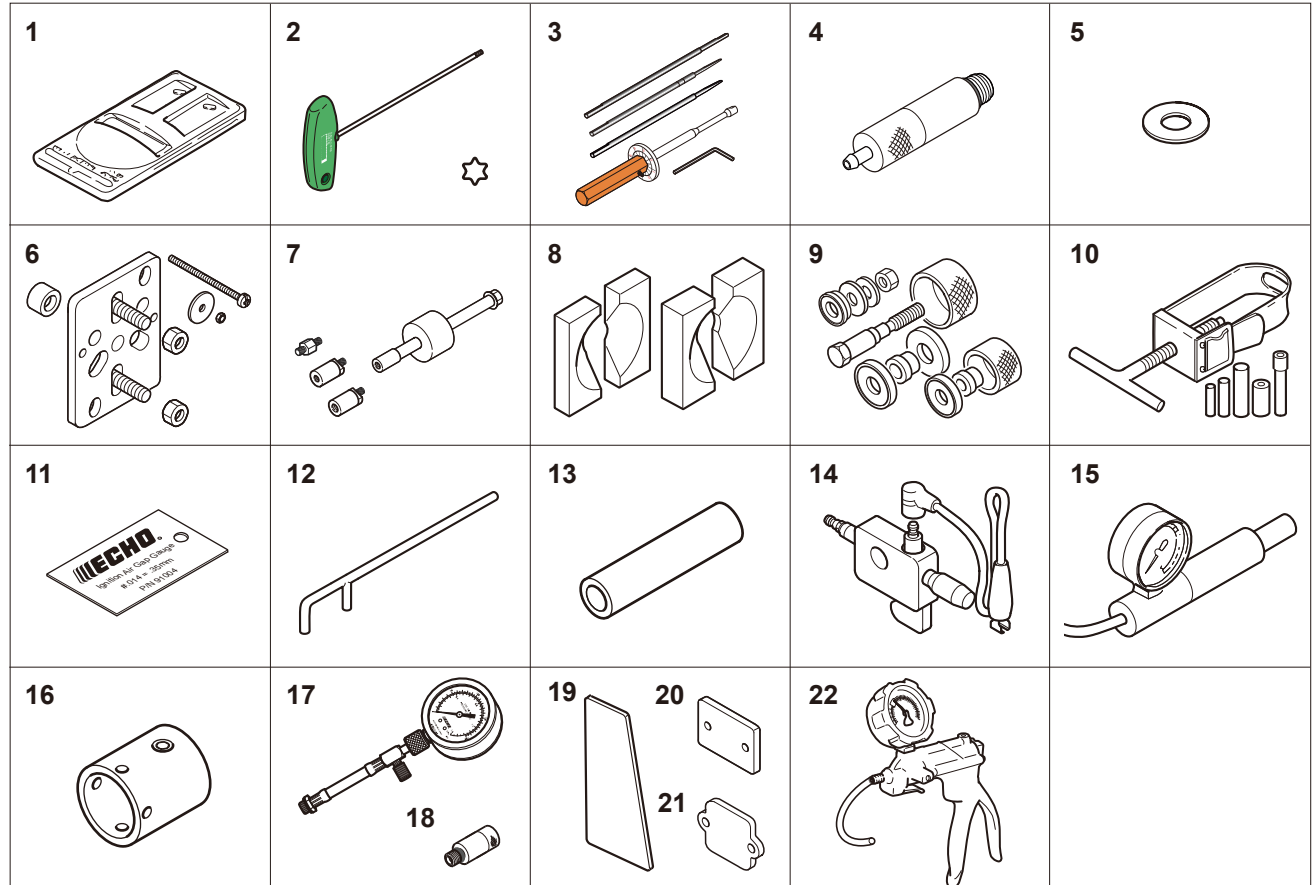
Material	Location	Remarks
Grease	Drive shaft	EPNOC AP2 (Lithium based grease) P/N X695-000060
	Gear case	
	Rewind spring	
	Starter center post	
	Oil seal inner lips	
Thread locking sealant	Fuel tank	Loctite #242, ThreeBond #1324 or equivalent
	Muffler cover	
	Cylinder cover	
	Stud bolt	Loctite #648 or equivalent
Liquid gasket	Gear case seams	P/N X686-000000 ThreeBond 1207D

1-5 Service limits



Description		mm (in)	
A	Cylinder bore	When plating is worn and aluminum can be seen	
B	Piston outer diameter	Min.	33.91 (1.335)
C	Piston pin bore	Max.	9.035 (0.3557)
D	Piston ring groove	Max.	1.6 (0.063)
E	Piston ring side clearance	Max.	0.1 (0.004)
F	Piston pin outer diameter	Min.	8.98 (0.3535)
G	Piston ring width	Min.	1.45 (0.057)
H	Piston ring end gap	Max.	0.5 (0.02)
K	Con-rod small end bore	Max.	12.025 (0.4734)
L	Crankshaft runout	Max.	0.03 (0.001)
M	Clutch drum bore	Max.	59.5 (2.34)

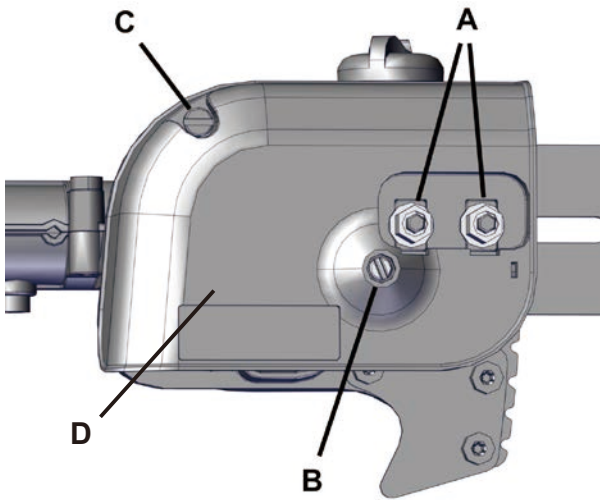
1-6 Special tools



Key	Part Number	Description	Reference
1	G310-000050	Tachometer PET-304	Measuring engine speed to adjust Carburetor
2	X602-000340	Torx wrench (T27)	Removing and installing bolt
3	Y089-000094	Carburetor adjustment tool	Adjusting Carburetor
4	A131-000160	Pressure connector	Checking crankcase and cylinder leakages
5	363018-00310	Washer	Installing crankcase oil seal (starter side)
6	Y089-000111	Puller	Removing magneto rotor
7	P021-044870	PTO shaft puller	Removing PTO shaft
8	897701-02830	Bearing wedge	Removing ball bearings on cankshaft
9	897701-14732	Bearing tool	Removing and installing ball bearings on crankcase
10	897702-30131	Piston pin tool	Removing and installing piston pin (Use 8mm dia. adapter)
11	91004	Module air gap gauge	Adjusting pole shoe air gaps
12	897712-04630	2-pin wrench	Removing and installing pawl carrier
13	897726-09130	Oil seal tool	Installing crankcase oil seals
14	897800-79931	Spark tester	Checking ignition system
15	897803-30133	Pressure tester	Testing Carburetor and crankcase leakages
16	91156	Load adapter	Properly engine loading for adjusting carburetor
17	91037	Compression gauge	Measuring cylinder compression
18	P021-051690	Adapter	Measuring cylinder compression (Use with 91037)
19	91041	Pressure rubber plug	Plugging exhaust port to test crankcase / cylinder leakages
20	897826-16131	Pressure rubber plug	Plugging intake port to test crankcase / cylinder leakages
21	897827-16131	Pressure plate	Plugging intake port to test crankcase / cylinder leakages
22	91149	Pressure / vacuum tester	Testing crankcase / cylinder leakages

2 SERVICE HINT

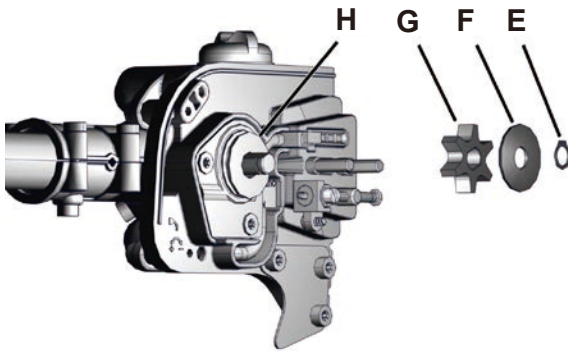
2-1 Installing Load adapter



1. Remove two nuts (A) and screw (C). Turn chain tensioning screw (B) counterclockwise to release chain tension.

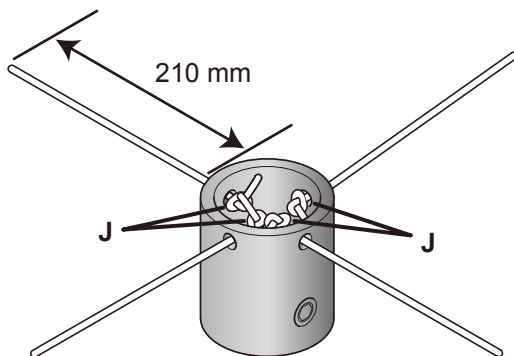
2. Remove sprocket guard (D).

3. Remove guide bar and saw chain.

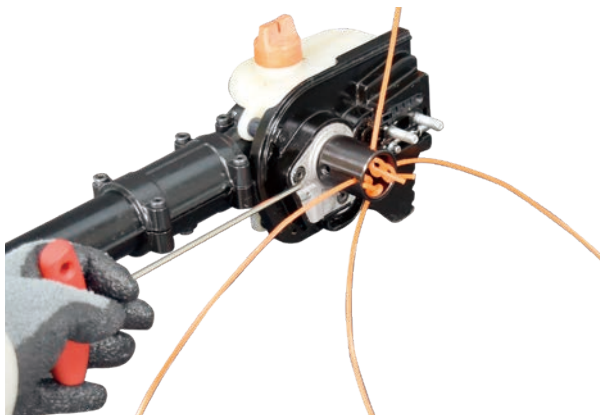


4. Remove snap ring (E), washer (F) and drive sprocket (G).

NOTE: Do not remove washer (H).



5. Insert nylon lines (2.4 diameter) through four holes in Load adapter 91156 and make four knots (J) as shown. Cut the lines to 210 mm from eyelet on Load adapter.



6. Install Load adapter output end of drive shaft, tighten two screws (K) using a 3 mm hex. wrench.

