

**SOLAR  
WINGS**

**BOOSTER**

**BOOSTER MK1  
PARTS CATALOGUE-ISSUE 1**

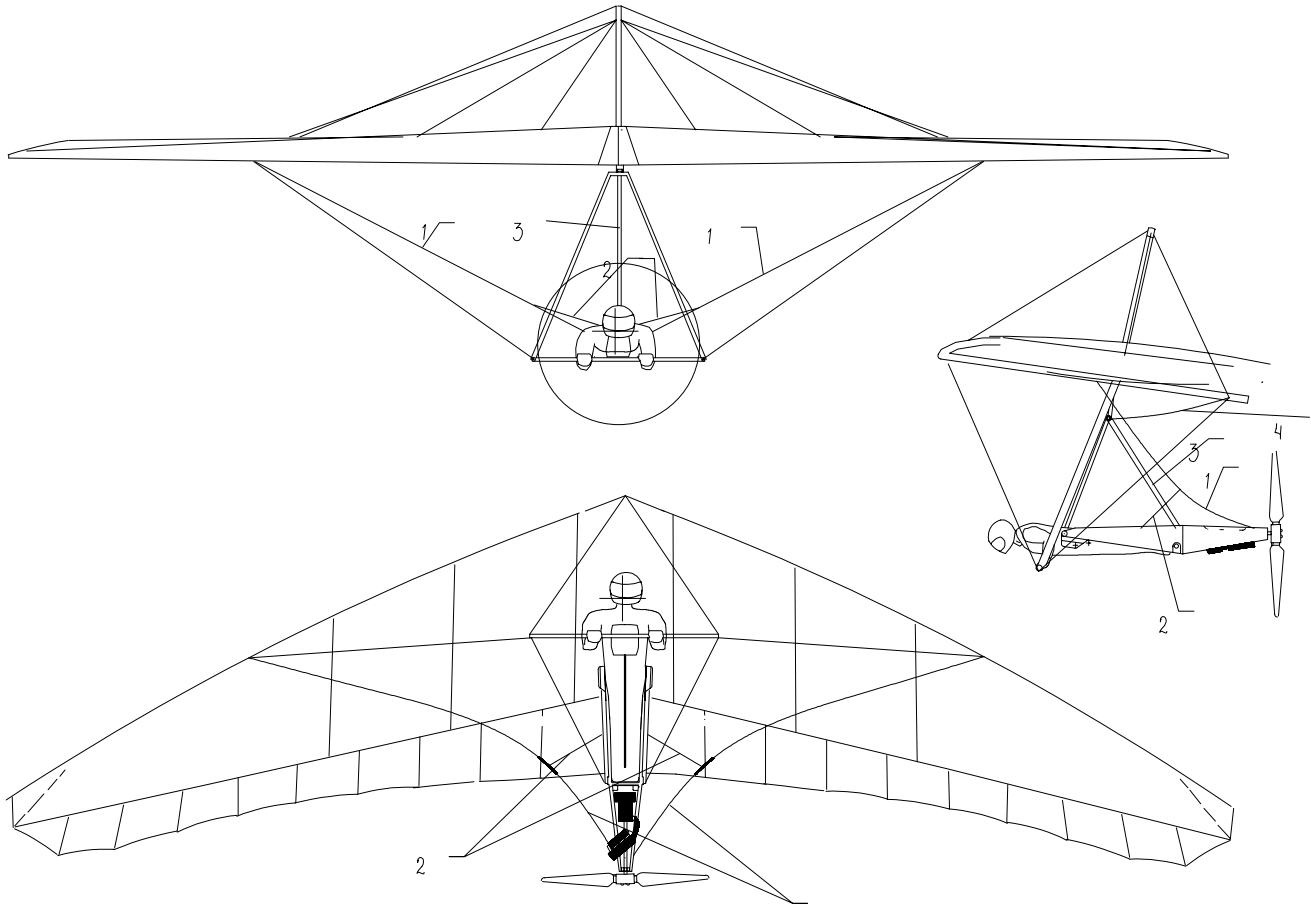


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## GENERAL ARRANGEMENT

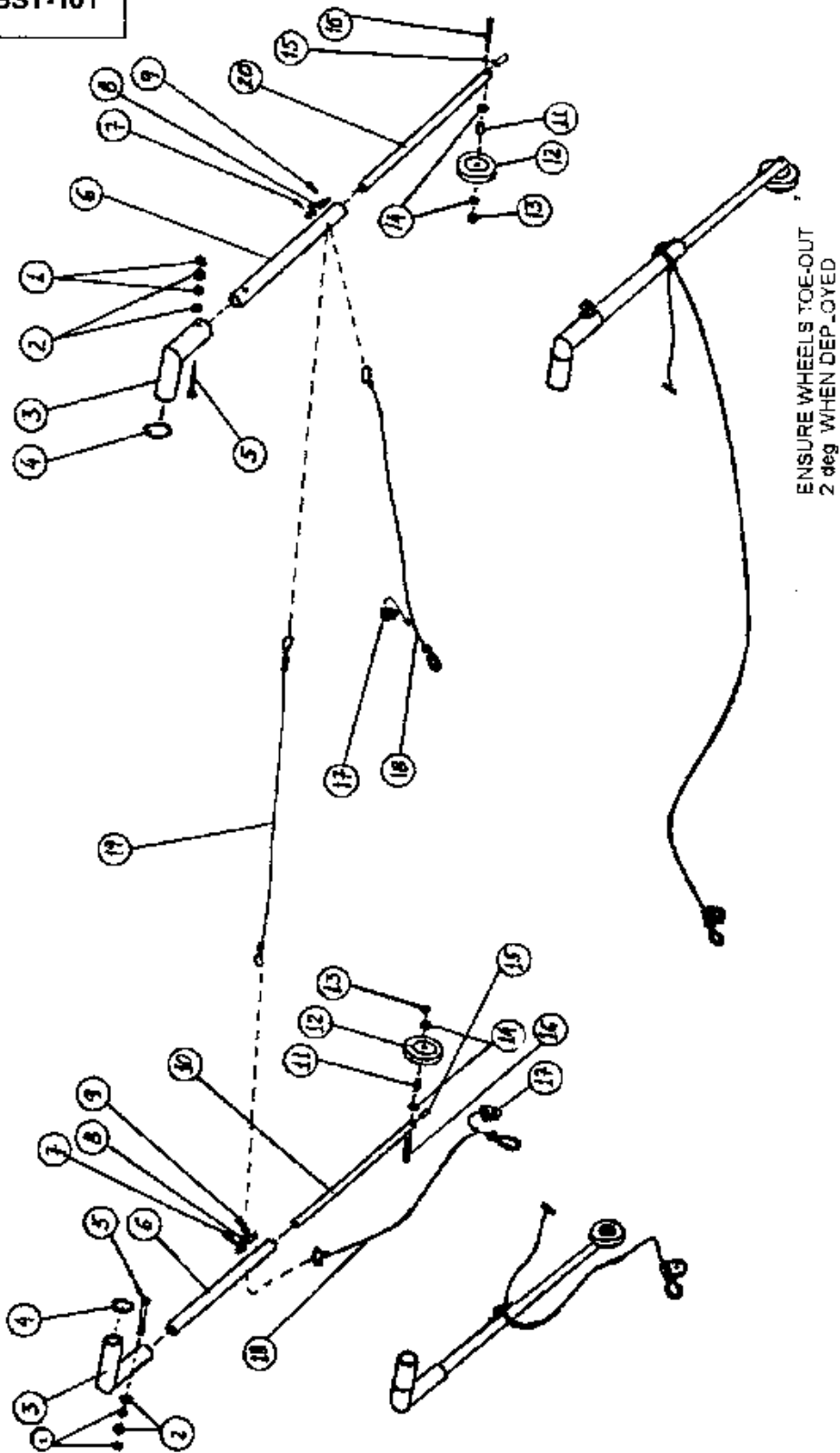


1. SIDE LIMIT CABLE
2. SIDE LIMIT CABLE BUNGEEES
3. TORQUE TUBE
4. ARRESTER CABLE

UNDERCARRIAGE ASSEMBLY

BOOSTER

BST-101



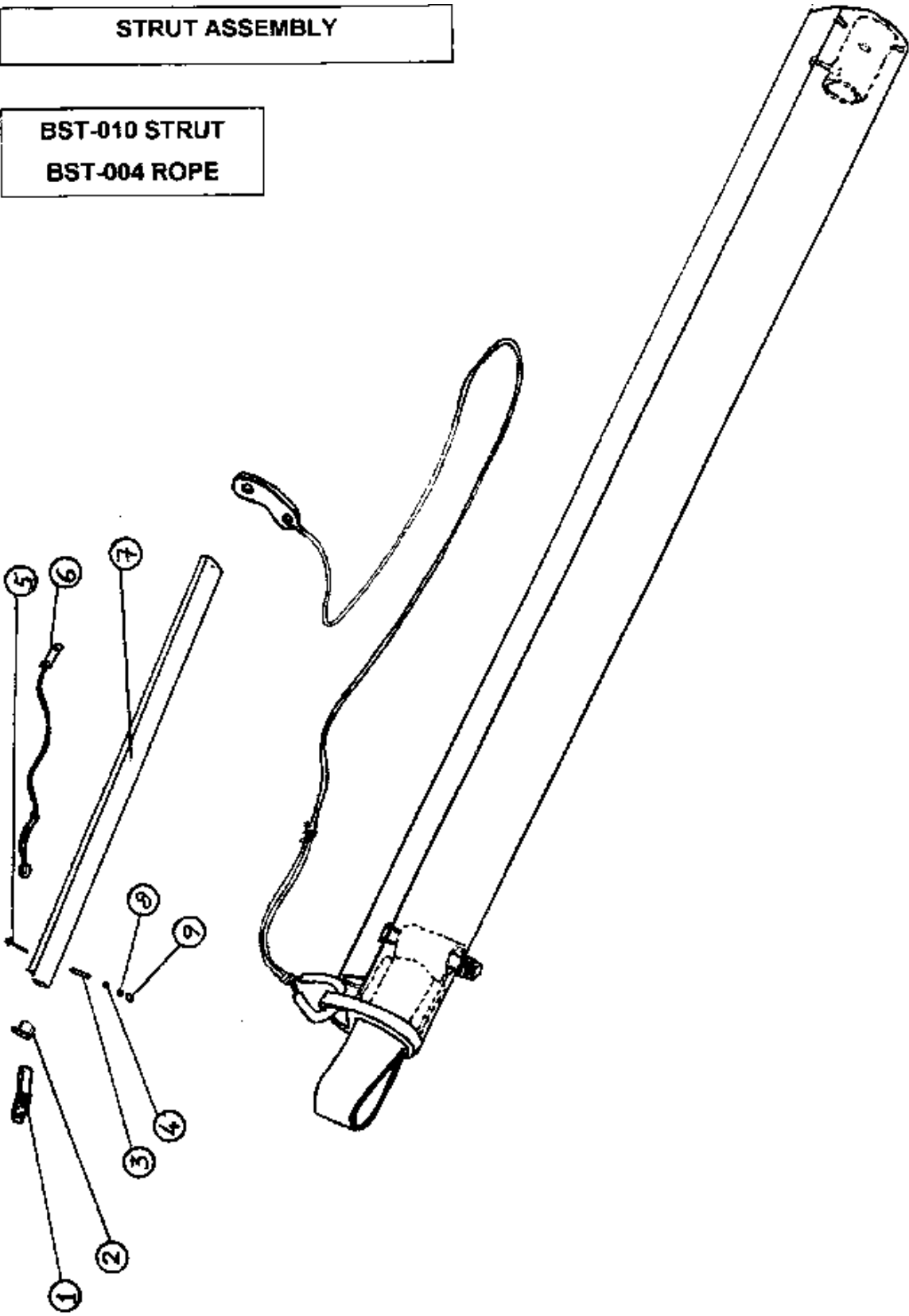
## UNDERCARRIAGE ASSEMBLY

**BST-101**

<b>ITEM</b>	<b>PART NUMBER</b>	<b>DESCRIPTION</b>
1	FNM5-NT	M5 NYLOCK NUT T TYPE
2	FW3-12	3/16 × 3/4 × 1/16 M/S WASHER
3	ZMS-092	ELBOW
4	EFTC-10	O-RING 1.7/8 × 3/16
5	FBM5-45	M5 × 45 HEX HT BOLT
6	ZMA-145	UPPER LEG
7	FR6-12-002	3/16 DIA × 3/8 RIVET
8	RM-1	DECK EYE
9	FMSST-001	NO 12 × 3/4" PAN HD POS S/TAP SCREW
10	ZMA-147	RIGHT DOWN LEG
11	ZSP-292	BUSH
12	WW-011	BOOSTER WHEEL
13	FNU4-NT	¼ T EX/THIN TYPE NYLOCK NUT
14	FW4-T4	¼" TALP WASHER
15	END-CAP NO4	END-CAP NO 4
16	FBU4-24	2.1/2 × ¼ UNF HEX BOLT
17	RP-1	R 1550 SINGLE BLOCK/MICRO
18	BST-002	UNDERCARRIAGE RETRACTION WIRE
19	BST-001	SPREADER WIRE
20	ZMA-146	LEFT DOWN LEG

**STRUT ASSEMBLY**

**BST-010 STRUT**  
**BST-004 ROPE**



## STRUT ASSEMBLY

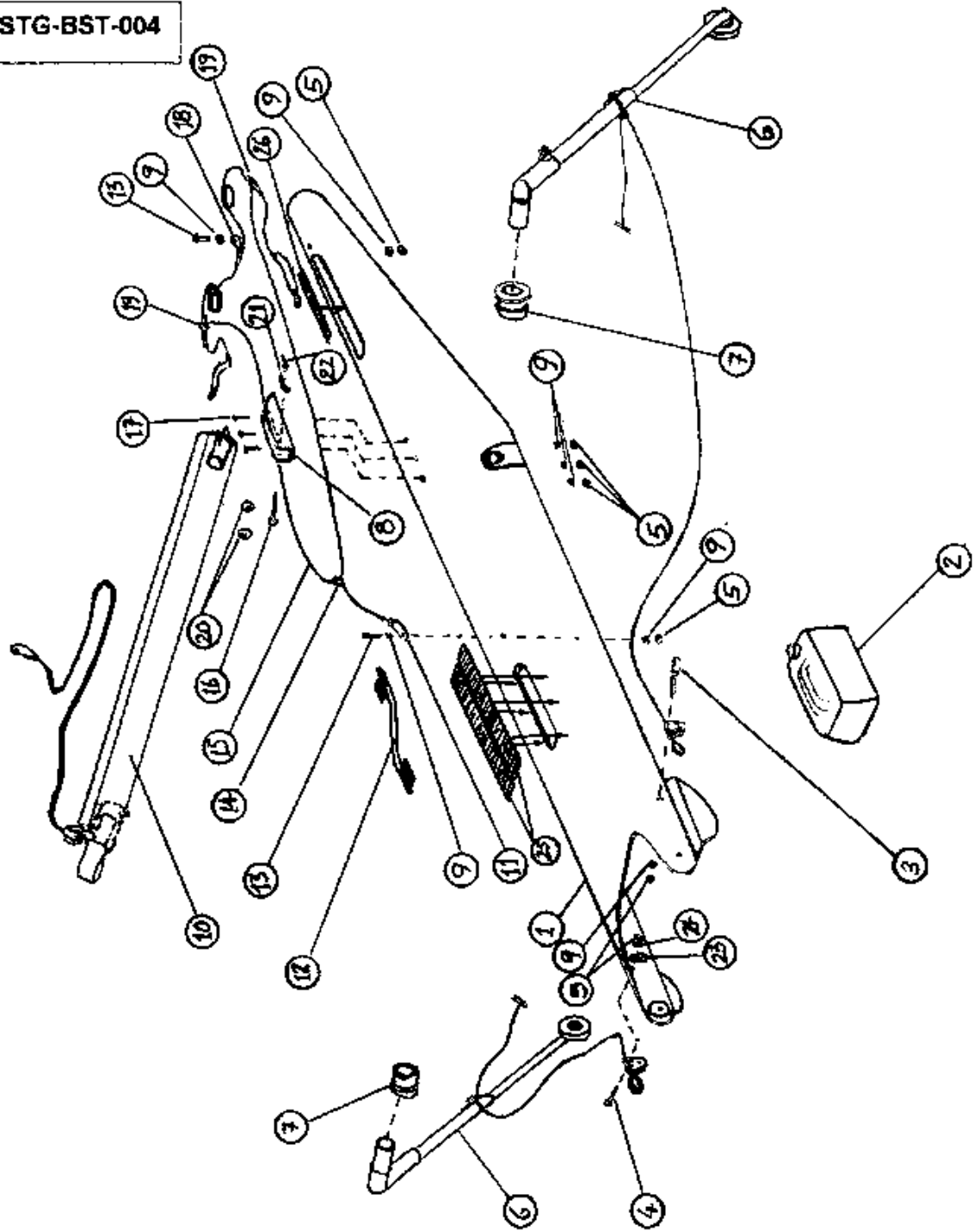
**BST-010 STRUT**

**BST-004 ROPE**

<b>ITEM</b>	<b>PART NUMBER</b>	<b>DESCRIPTION</b>
1	WEBB-002	STRUT CONNECTION STROP
2	ZKN-124	STRUT UPPER CASTING
3	ZSP-289	STRUT SPACER
4	PMC-SB6	6mm SKIFFY RING
5	FBM6-50	M6 × 50 HEX HT BOLT
6	BST-004	KEEL ROPE
7	BST-010A	STRUT COMPLETE
8	FNM6-NT	M6 NYLOCK NUT T TYPE
9	PMC-RSC6	6mm RAISED SKIFFY CAP ONLY

**TOP SHELL ASSEMBLY**

**STG-BST-004**





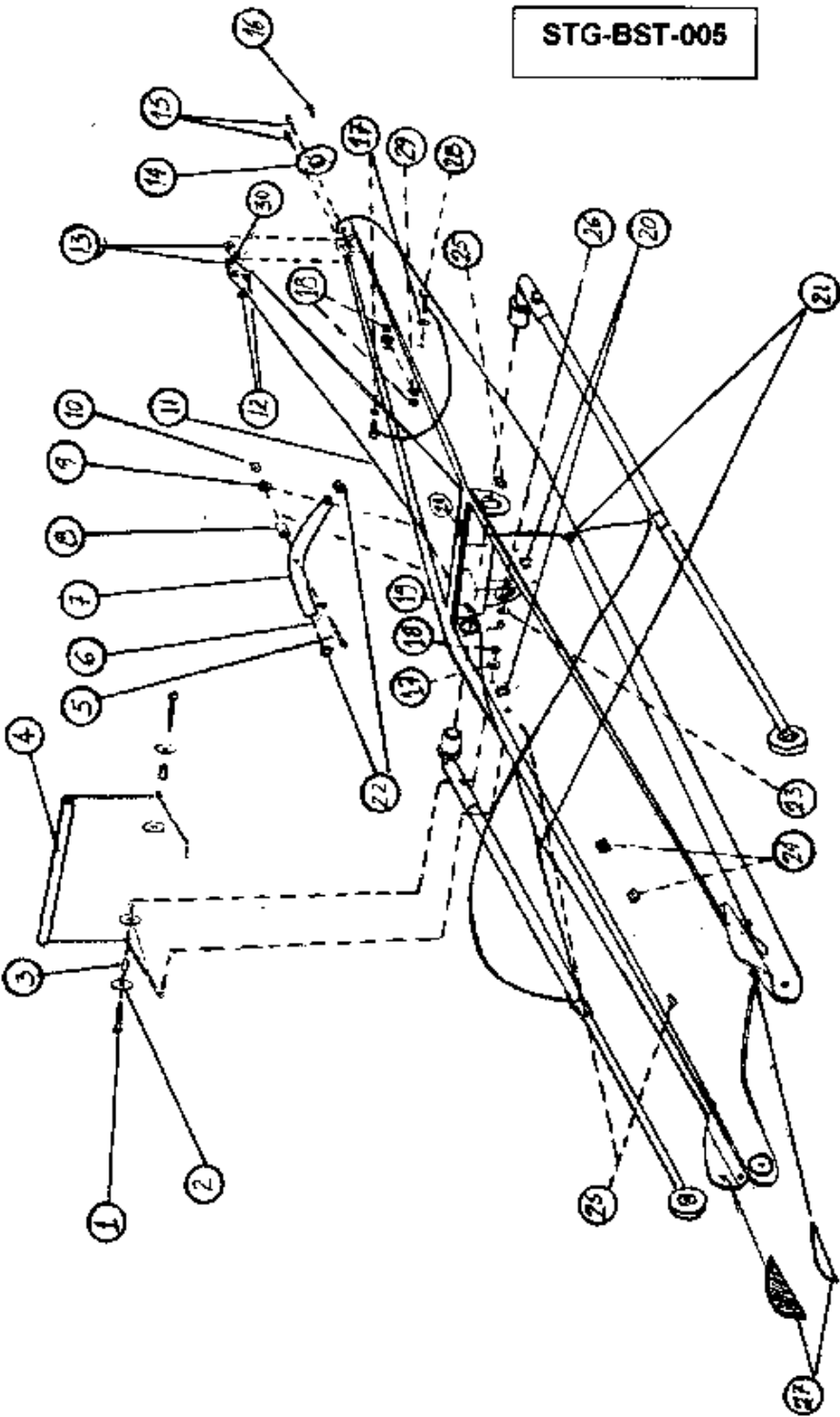
# TOP SHELL ASSEMBLY

STG-BST-004

ITEM	PART NUMBER	DESCRIPTION
1	COM-006	SHELL WITH HARNESS BEARINGS
2	EFT-9	FUEL TANK
3	ZMS-299	EYE BOLT
4	FBM6-25	M6 × 25 HEX HT BOLT
5	FNM6-NT	M6 NYLOCL NUT T TYPE
6	BST-101	UNDERCARRIAGE ASSEMBLY
7	ZMP-104	LEG BEARING
8	ZCH-028	STRUT MOUNT
9	FW4-T4	¼" TALP WASHER
10	BST-102	STRUT ASSEMBLY (COMPLETE)
11	RT-185	5/16 HOLE L/WT SUP TANG SS2004
12	BST-012	FUEL TANK SUPPORT TUBE ASSEMBLY
13	FSM6-20	M6 × 20 HX HT SET SCREW
14	FPSR-003	SAFETY RING
15	VSC3-001	3 MM SHOCK CORD (1500 MM LONG)
16	FBA4-17	AN4-17 A/C HEX BOLT
17	FMS6-25	M6 × 25 C/SNK SLOTTED
18	BST-003	SIDE WIRES ASSEMBLY
19	HTW-001	CABLE TIE 140MM × 3.6 MM
20	FWP-001	PLASTIC WASHERS
21	FNU4-WN	¼ UNF WING NUT
22	FP-003	SAFETY PIN
23	HCC-003	½ NYLON P CLIP
24	FW4-T3	¼ T3LP WASHER
25	VW50-004	SMOOTH VELCRO (275MM LONG)
26	DT116-001	WALK TAPE (320MM LONG)

**BOTTOM SHELL ASSEMBLY**

**STG-BST-005**



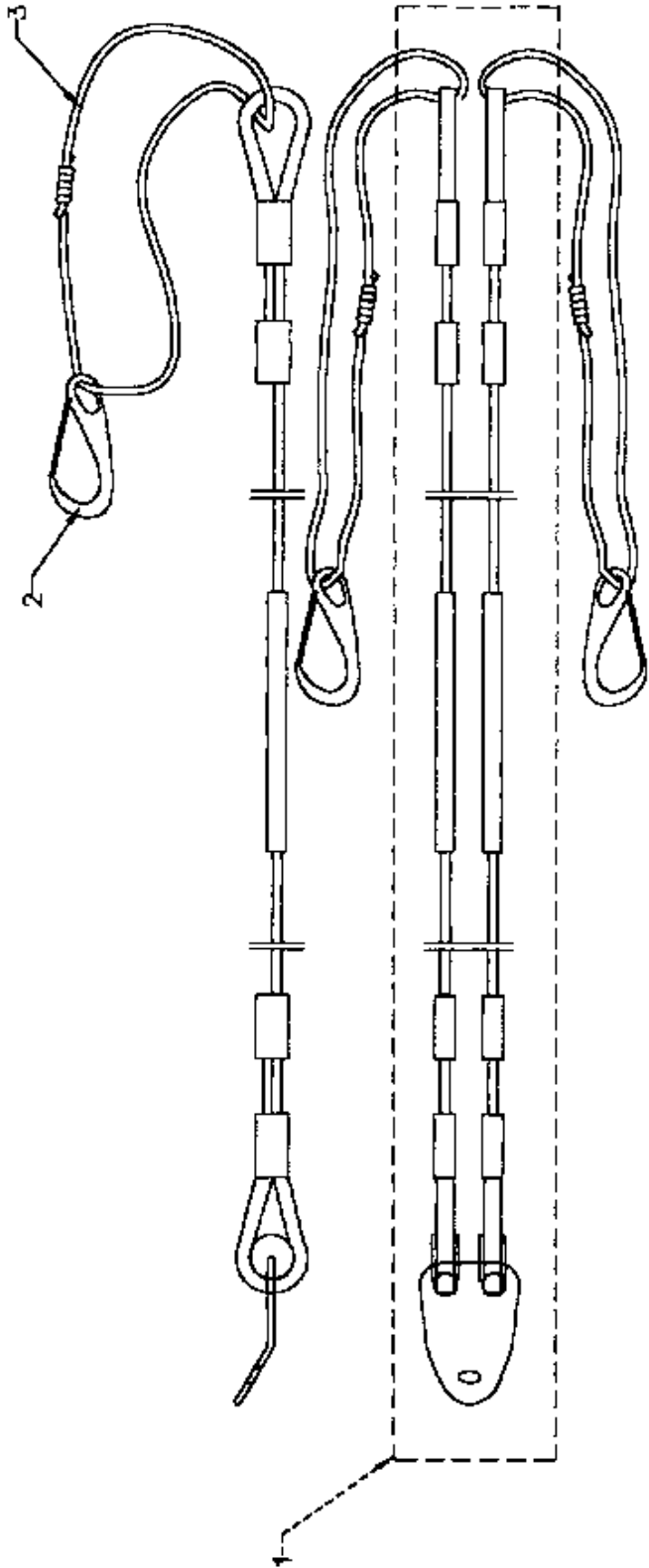
## BOTTOM SHELL ASSEMBLY

### STG-BST-005

ITEM	PART NUMBER	DESCRIPTION
1	FBM6-25	M6 × 25 HEX HT BOLT
2	FW4-18	¼" 1 ½ × 1/16 MS WASHER
3	ZSP-013	SPACER
4	BST-011	STIRRUP ASSEMBLY
5	FBM6-70	M6 × 70 HEX HT BOLT
6	PMS6-001	SADDLE WASHER
7	ZMA-141	BOOMERANG TUBE
8	ZSP-293	SPACER
9	FW4-12	¼ × ¾ × 16 M/S YELL. WASHER
10	FNM6-NT	M6 NYLOCK NUT T TYPE
11	VSC3-001	3 MM SHOCK CORD (1M LONG)
12	FNM5-NT	M5 NYLOCK NUT T TYPE
13	LT-028	CRIMP TERMINAL
14	COM-009	SHELL END PLATE
15	FMS5-20	M5 × 20 HT PN HD SET
16	FMSR-001	BLACK SCREW PLASTIC
17	FW4-T4	¼" 4 WASHER
18	FNM6-NT	M6 NYLOCK NUT T TYPE
19	PTM6-001	6 MM ENOTS TUBE (250MM LONG)
20	HTW-004	CABLE TIE 300 MM × 4.8 MM
21	FPSR-003	SAFETY RING
22	H CJ-004	JUBILEE CLIP
23	FW4-T3	¼ T3LP WASHER
24	HTM-001	TY-WRAP MOUNT
25	PMM-008	GROMMET
26	HCC-003	P-CLIP
27	VW50-004	SMOOTH VELCRO
28	FSM6-20	M6 × 20 HX HT SET SCREW
29	FW5-14	5/16 × 1.1/4 WASHER
30	FWM5-B	5 MM M/S FORM B WASHER

**BOOSTER SIDE WIRE ASSEMBLY**

**BST-003**



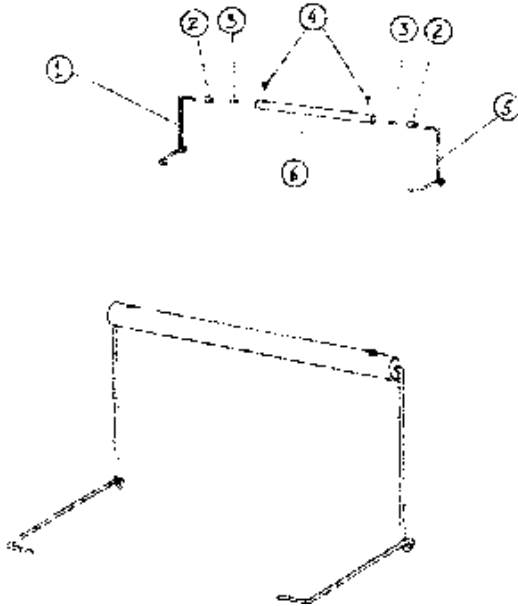
## **BOOSTER SIDE WIRE ASSEMBLY**

### **BST-003**

<b>ITEM</b>	<b>PART NUMBER</b>	<b>DESCRIPTION</b>
1	BST-003A	BOOSTER SIDE CABLE COMPLETE
2	RM-4	50mm WICHARD TACK HOOK
3	VNR-BL3	3mm HIBRITE – 500 mm LONG (BLUE)

**STIRRUP ASSEMBLY**

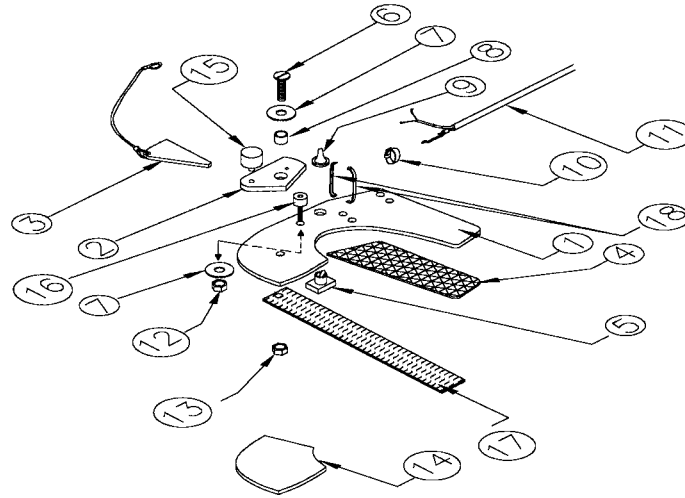
**BST-011**



ITEM	PART NUMBER	DESCRIPTION
1	ZMS-297	LEFT STIRRUP SPRING
2	ZMP-108	STIRRUP BEARING
3	RF2.5-CCU	2.5 mm ZN PLT CPR FERRULE
4	FR4-12-001	1/8 × 3/8 POP RIVET
5	ZMS-298	RIGHT STIRRUP SPRING
6	ZMA-151	STIRRUP TUBE

# HAND THROTTLE ASSEMBLY

STG-BST-008



ITEM	PART NUMBER	DESCRIPTION
1	COM-010	HAND THROTTLE PLATE
2	ZMP-106	BOOSTER THROTTLE LEVER
3	BST-016	CRUISE CHEESE ASSEMBLY
4	VW50-004	50 MM ADHESIVE LOOP VELCRO (200 MM)
5	LS-017	MINI TOGGLE SWITCH
6	FMS5-20	M5 × 20 MM PN HD SET
7	FW4-T4	¼" T4LP WASHER
8	ZSP-013	SPACER
9	LS-018	COVER FOR MINI TOGGLE SWITCH
10	HTW-004	TY-WRAP (BLACK 300 × 4.8 MM)
11	BST-013	ACCELERATOR CABLE ASSEMBLY

<b>HAND THROTTLE ASSEMBLY</b>
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<b>ITEM</b>	<b>PART NUMBER</b>	<b>DESCRIPTION</b>
12	FNM6-NT	M6 NYLOCK NUT T TYPE
13	FNM5-NT	M5 NYLOCK NUT T TYPE
14	DTI16-001	NON SLIP (150MM LONG) USE TEMPLATE 3
15	EVI-003	BONDED FEET-M6
16	FCM6-20	M6 × 20 MM SCKT CAP SCREW
17	WEBB-003	HAND PLATE STROP
18	H CJ-013	MICROFLEX NO 1 JUBILEE CLIP



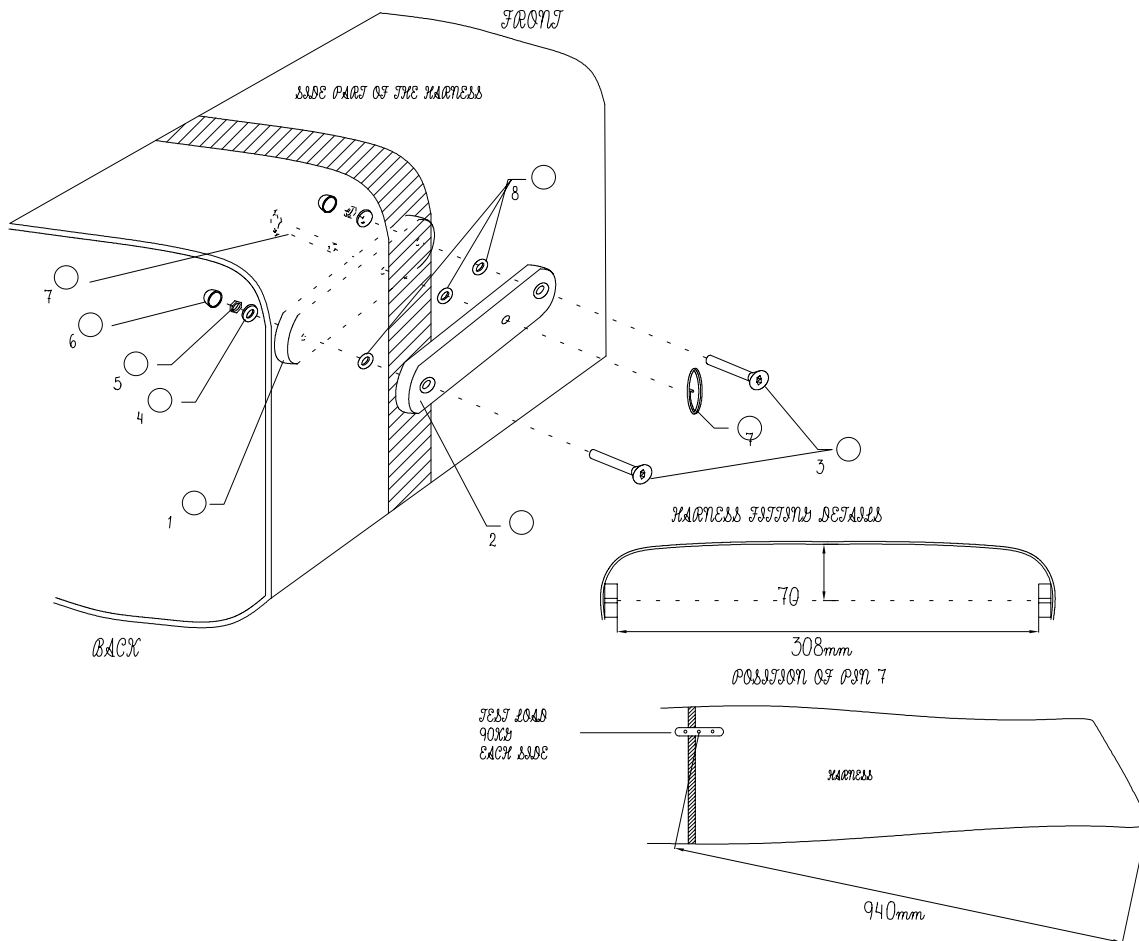
**CRUISE CHEESE ASSEMBLY**

**BST-015**



# HARNESS PLATES ASSEMBLY (SHORT)

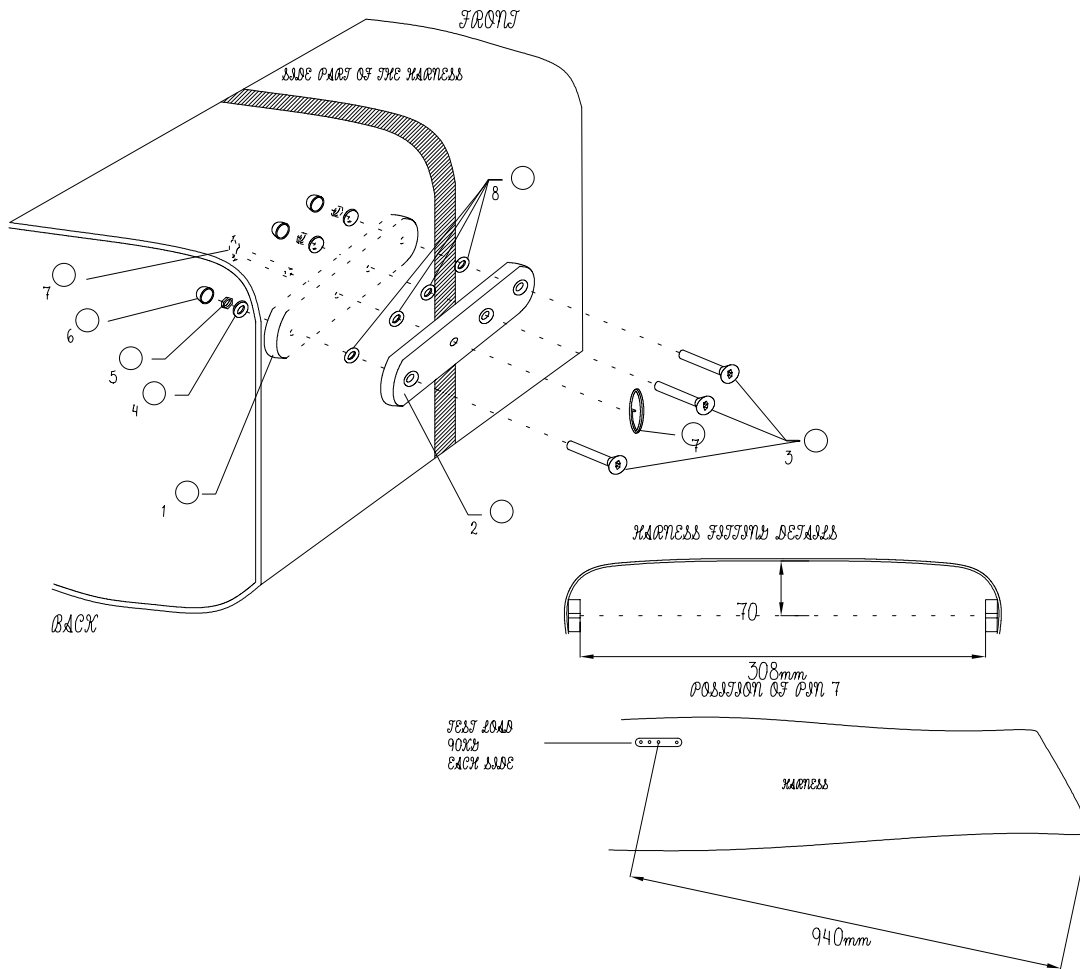
STG-BST-009



ITEM	PART NUMBER	DESCRIPTION
1	ZPL-142	INSIDE HARNESS PLATE
2	ZPL-143	OUTSIDE HARNESS PLATE
3	FSCM6-18	M6 × 30 MM C/SNK HD CAP
4	PMC-SB6	6 MM SKIFFY RING
5	FNM6-NT	M6 NYLOCK NUT T TYPE
6	PMC-RSC6	6 MM RAISED SKIFFY CAP

# HARNESS PLATES ASSEMBLY (LONG)

STG-BST-010

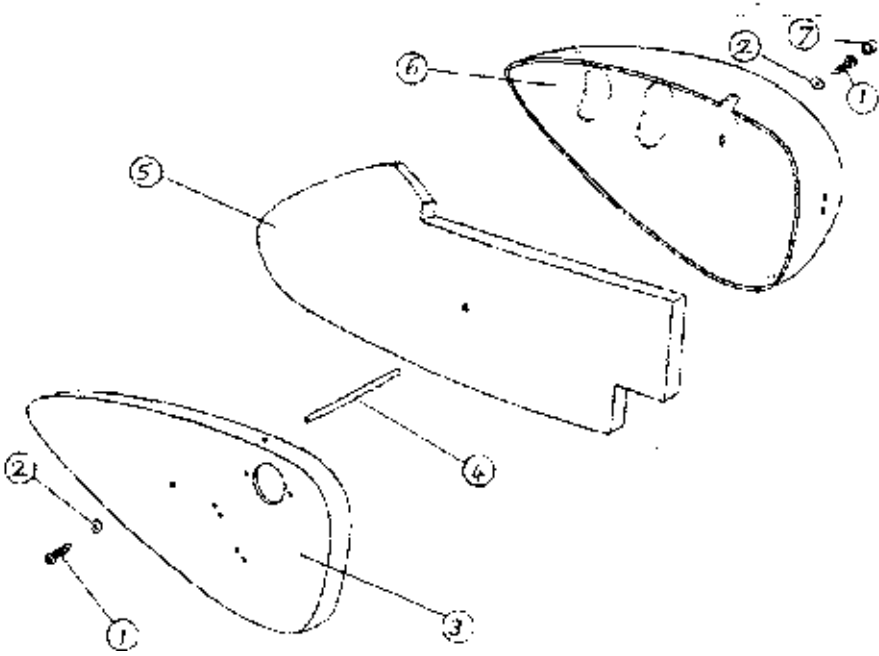


ITEM	PART NUMBER	DESCRIPTION
1	ZPL-144	INSIDE HARNESS PLATE
2	ZPL-145	OUTSIDE HARNESS PLATE
3	FSCM6-18	M6 × 30 MM C/SNK HD CAP
4	PMC-SB6	6 MM SKIFFY RING
5	FNM6-NT	M6 NYLOCK NUT T TYPE
6	PMC-RSC6	6 MM RAISED SKIFFY CAP
7	FPWP-001	PIN
8	GEN-OG	SIZE

**AIR BOX ASSEMBLY**

**STG-BST-003**

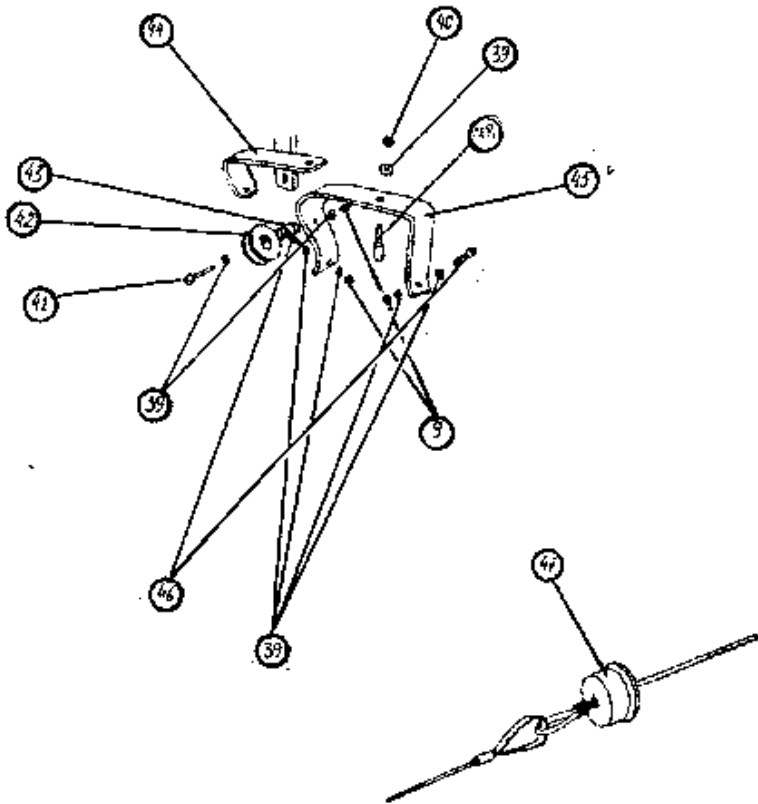
**NOTE: INSTALL 5  
SO HOLE IN 3 IS  
CLEAR!**



ITEM	PART NUMBER	DESCRIPTION
1	FMS5-20	FMS5-20 SCREW
2	PMC-SB6	6 MM SKIFFY RING
3	COM-007	AIR BOX PLATE DRILLED (BOOSTER)
4	ZMP110	AIRBOX JOINER ROD
5	PF-008	AIR BOX FOAM
6	COM-008	AIR BOX SHELL DRILLED (BOOSTER)
7	PMC-RSC6	6 MM RAISED SKIFFY CAP

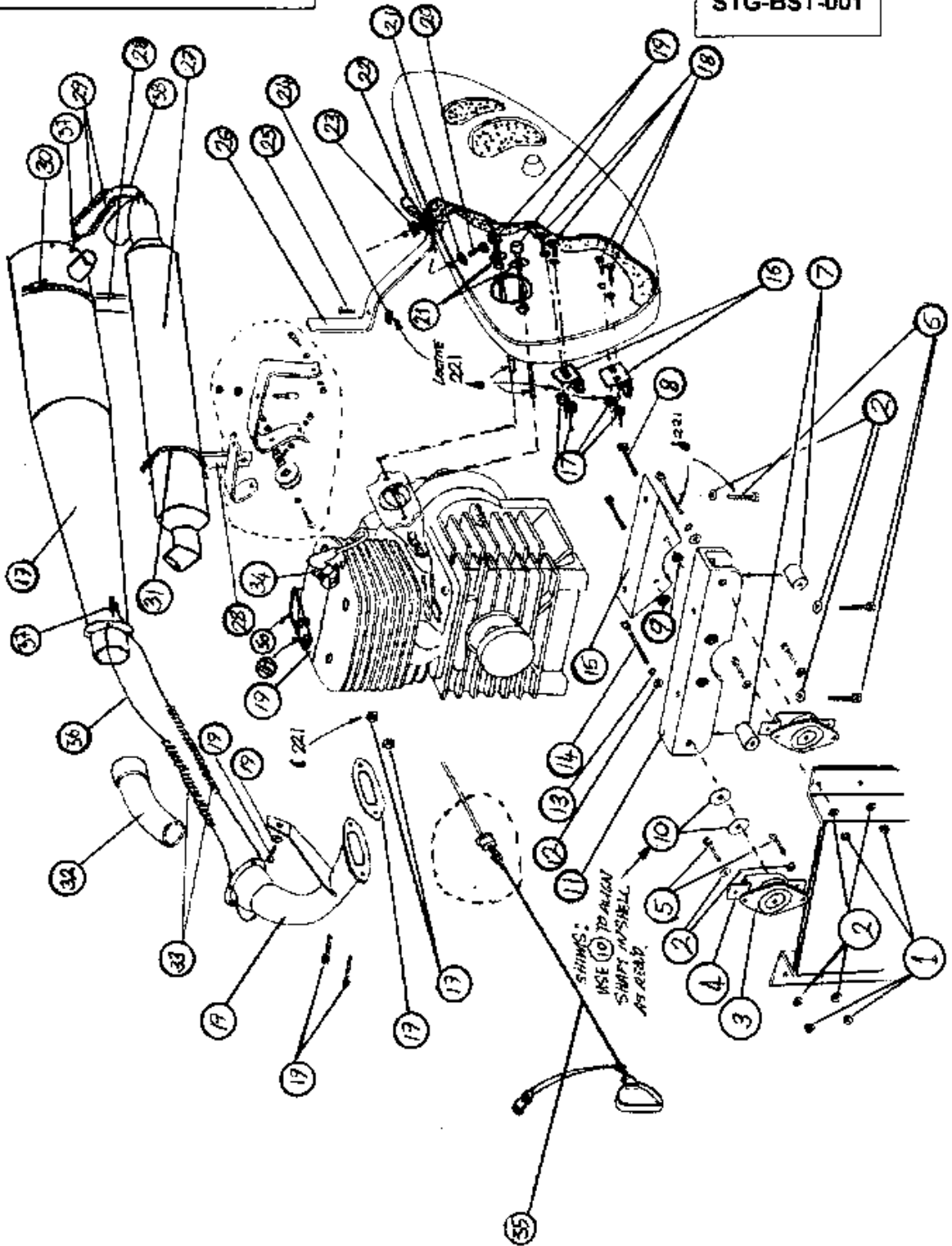
**ENGINE ASSEMBLY**

**STG-BST-001**



ENGINE ASSEMBLY

STG-BST-001



# ENGINE ASSEMBLY

## STG-BST-001

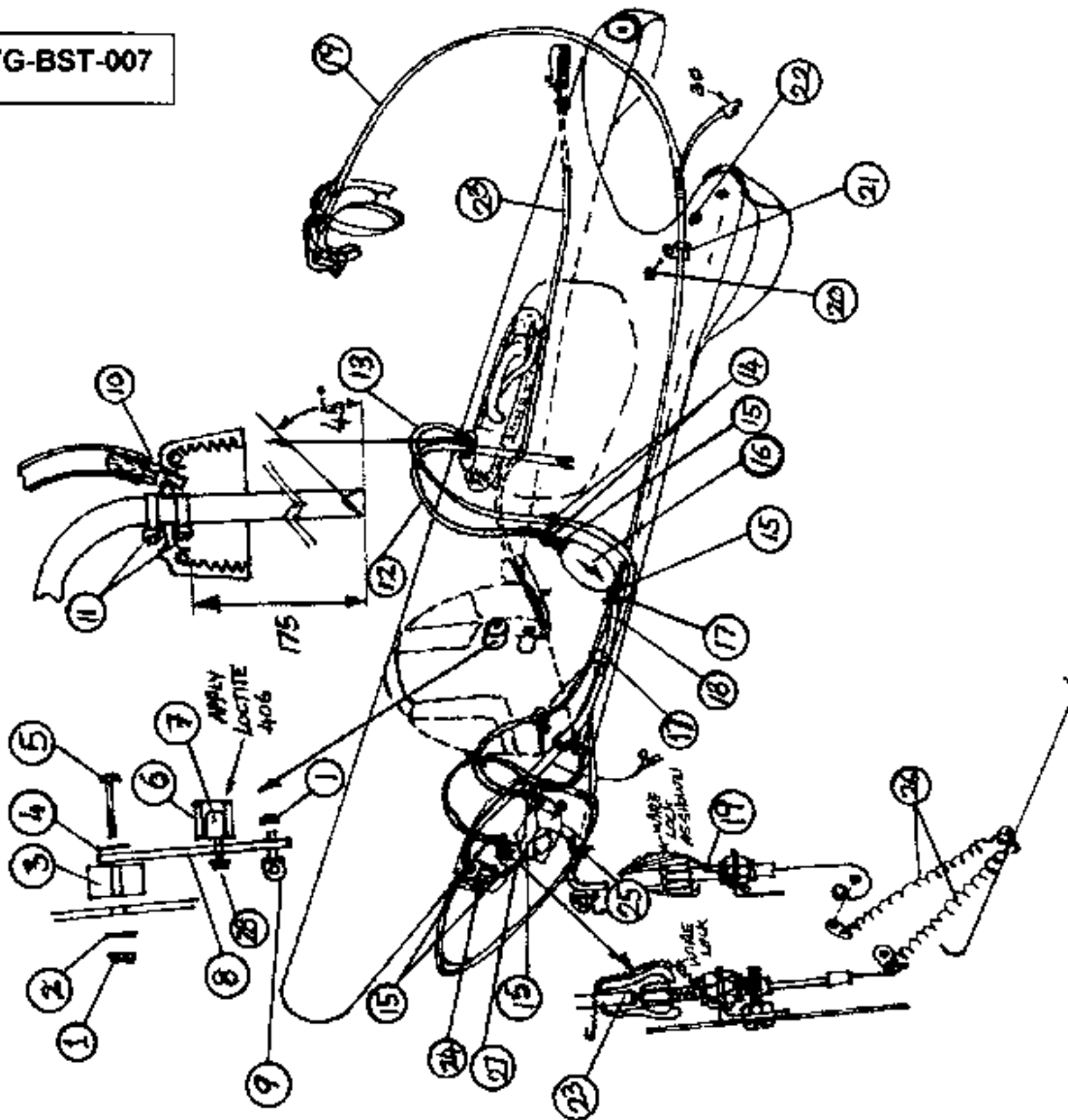
ITEM	PART NUMBER	DESCRIPTION
1	FNM8-NT	M8 NYLOCK NUT T TYPE
2	FWM8-B	8 MM FORM B WASHER Z ^ Y
3	EVI-008	AVM209/9
4	WEBB-001	STROP
5	FSM8-20	M8 × 20 HEX HT SET SCREW
6	FSM8-25	M8 × 25 HEX HT SET SCREW
7	ZSP-286	SPACER
8	FBM6-45	M6 × 45 MM HEX HT BOLT
9	FNM6-NT	M6 NYLOCK NUT T TYPE
10	FWP-002	10.5 × 32 MM NYLON WASHER
11	ZCH-026	FRONT ENGINE BEARER CHANNEL
12	FWM10-B	10 MM M/S FORM B WASHER
13	FWM10-SW	10 MM SPRING WASHER Z/Y
14	FBM10-55	M10 × 55 HT HEX BOLT
15	ZCH-027	REAR ENGINE BEARER CHANNEL
16	ZMS-300	CABLE BRACKET
17	FNM4-BX	M4 BRASS BINX NUT
18	FSM4-16	M4 × 16 PAN HD BRASS SCREW
19	PP-120/1	ENGINE PARTS Refer to RADNE 12 AERO ENGINE MANUAL
20	FCM5-16	M5 × 16 SCKT CAP SCREW
21	FWM5-B	5 MM M/S FORM B WASHER
22	HCC-003	(350 3328) ½" NYLON P CLIP
23	FNM5-NT	M5 NYLOCK NUT T TYPE
24	FNM8-TN	M8 NUT THIN TYPE
25	FMS8-15	M8 × 15 MM SKT BNT SET
26	ZPL-139	PLUG PROTECTOR

<b>ITEM</b>	<b>PART NUMBER</b>	<b>DESCRIPTION</b>
27	BST-006	AFTER MUFFLER ASSEMBLY
28	EVI-009	EXHAUST MOUNT
29	HS-014	EXHAUST SPRING (SHORT TYPE)
30	H CJ-003	70-90 MM JUBULEE CLIP
31	H CJ-006	50-70 MM STEEL HOSE CLIP
32	ZMS-294	EXHAUST CONNECTOR
33	HS-015	EXHAUST SPRING (LONG TYPE)
34	HCM14-001	14 MM HOSE CLIP
35	BST-009	STARTER CABLE ASSEMBLY
36	RW1.5-SS	1.5 MM WIRE
37	RF2-CCU	2 MM FERRULE
38	RW1.5-SS	1.5 MM WIRE
39	FW4-T3	¼ T.3 L.P M/S WASHER
40	FNU4-NT	¼ 'T' EX/THIN TYPE NYLOCK NUT
41	FBM6-30	M6 × 30 HEX HT BOLT Z/Y
42	RP-11	ALUMINIUM PULLEY
43	RP-12	ALUMINUM PULLEY BUSH
44	ZPL-141	PULLEY GUARD
45	ZPL-140	STARTER PLATE
46	ZMS-302	STARTER PLATE BOLT
47	ZMP-031	ROPE STOPER
48	FDM6-15	M6 × 15 DOME BOLT
49	FR61202	3/16" MONOBOLT
50	ZMA-154	RECOIL STOP



# FUEL, THROTTLE AND CHOKE ASSEMBLY

STG-BST-007



ITEM	PART NUMBER	DESCRIPTION
1	FNM6-NT	M6 NYLOCK NUT T TYPE
2	FW4-12	1/4 x 3/4 x 16 M/S Z/YELL. WASHER
3	ZSP-288	STOP MOUNT SPACER
4	FW4-T4	1/4" TALP WASHER
5	FBM6-30	M6 x 30 HEX HT BOLT Z/Y
6	ZMP-109	PROP BRAKE HOSE
7	FDM6-15	M6 x 15 DOME BOLT

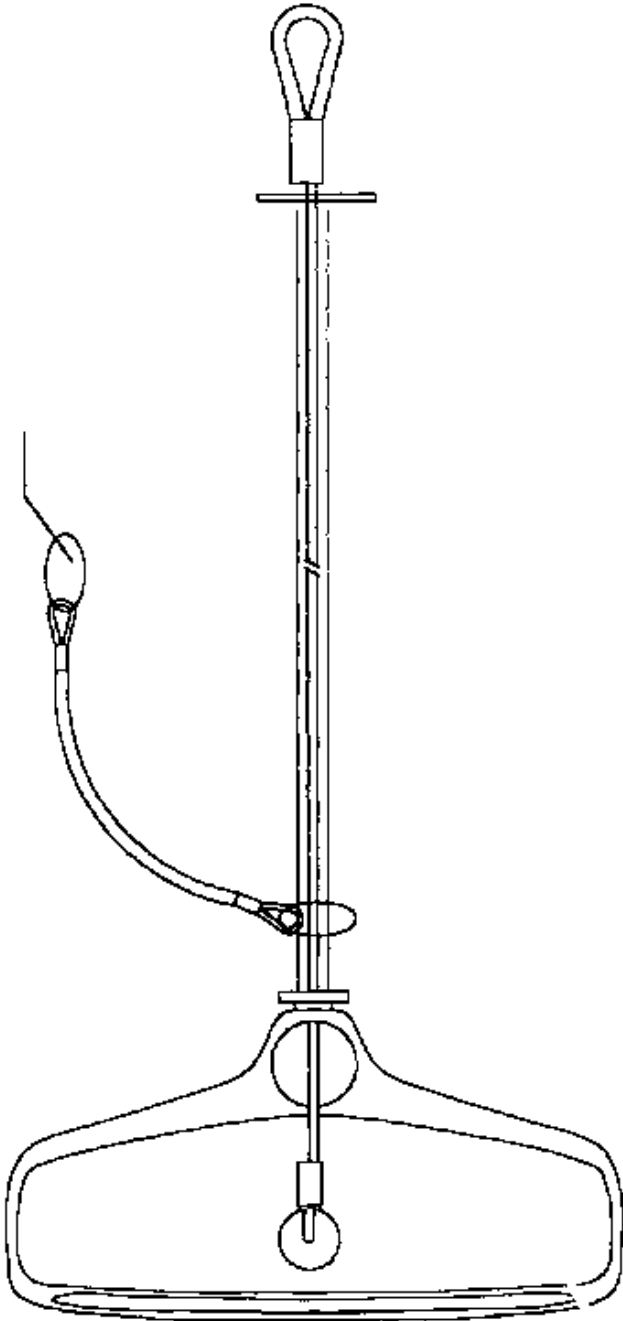
# FUEL, THROTTLE AND CHOKE ASSEMBLY

## STG-BST-007

ITEM	PART NUMBER	DESCRIPTION
8	ZPL-032	PROP BRAKE PLATE
9	ZMS-280	EYE BOLT
10	ZMS-285	M6 HOSE NIPPLE
11	HTW-002	CABLE TIE (3.6 140 MM)
12	EFLH-7	FUEL HOSE BLUE (440 MM)
13	PT12-001	BREATHER PIPE (1270MM LONG)
14	PMM-008	694-15090 RUBBER GROMMET
15	HCM10-001	9-11 MM SCREW CLIP
16	EFLC-6	ART 1450 PRIMER BULB ¼ BORE
17	HTW-004	CABLE TIE
18	EFLH-7	FUEL HOSE BLUE
19		SEE HAND THROTTLE ASSEMBLY
20		SEE TOP SHELL ASSEMBLY
21		“ “ “ “
22		“ “ “ “
23	BST-014	CHOKE CABLE ASSEMBLY
24	EFF-2	FUEL FILTER 90 DEG
25	HCC-033	½ " NYLON P CLIP
26	HS-004	RETURN SPRING MF 4412
27	EFLH-7	FUEL HOSE BLUE
28	FNU4-NT	¼ T EX/THIN TYPE NYLOCK NUT
29	ATUO-1-1	SOFT ALUMINIUM TUBE SPOUT
30	STG-BST-011	PARACHUTE IGNITION CUTOUT ASSY.

**STARTER CABLE ASSEMBLY**

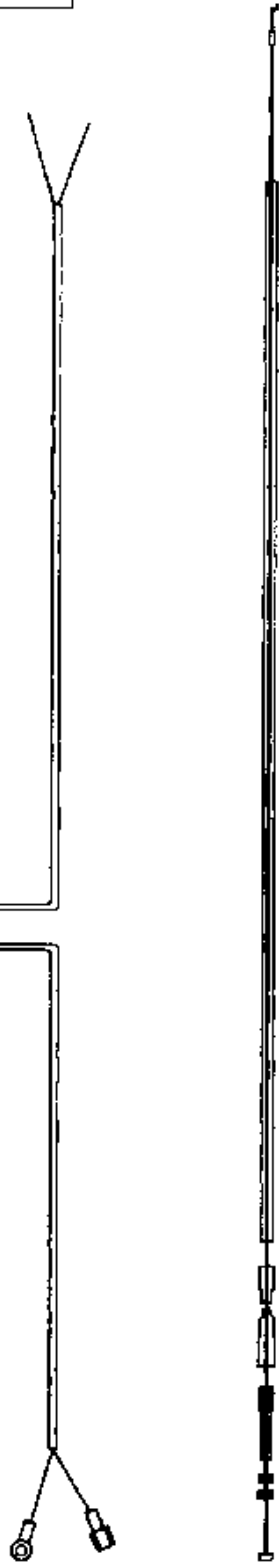
**STG-BST-009**



**THROTTLE CABLE ASSEMBLY**

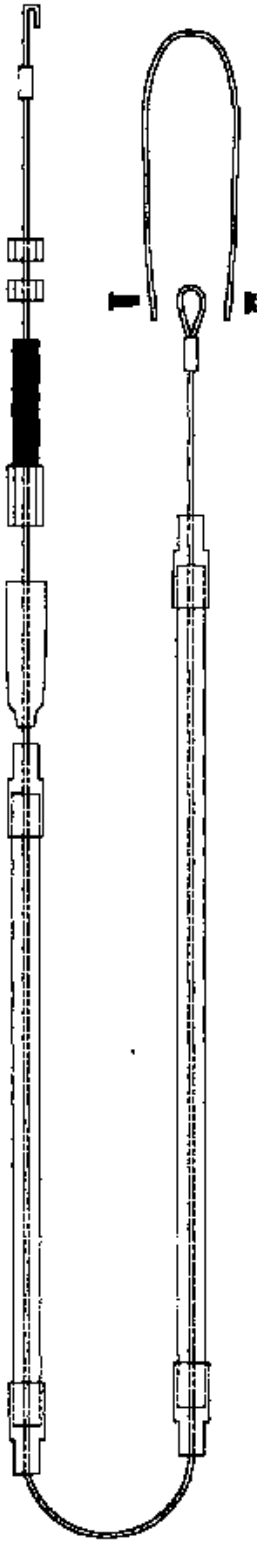
**BST-013**

CUT HERE FOR PARACHUTE CUTOFF SOCKET - SEE DRAWING STG-BST-011



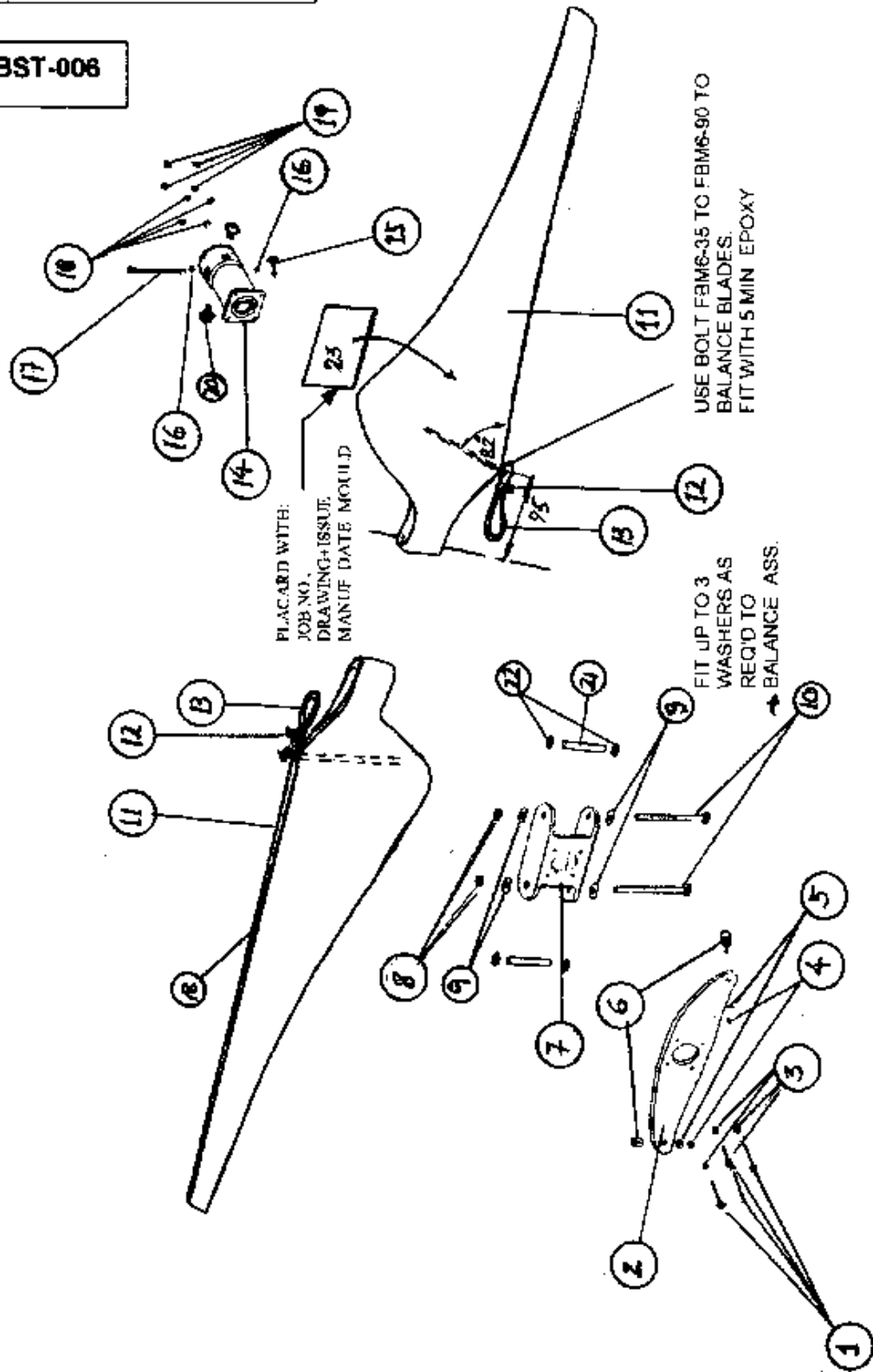
**CHOKE CABLE ASSEMBLY**

**BST-014**



**PROPELLER ASSEMBLY**

**STG-BST-006**



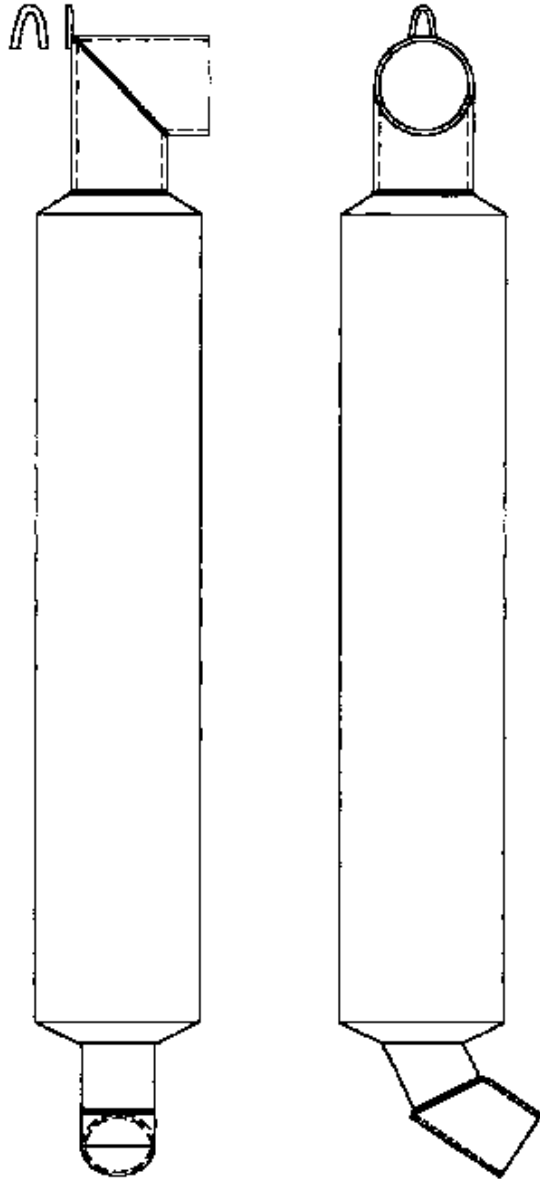
# PROPELLER ASSEMBLY

## STG-BST-006

ITEM	PART NUMBER	DESCRIPTION
1	FBM5-35	M5 × 35 MM HEX HT BOLT
2	COM-004	COMPOSITE SPRING (FOLD. PROP)
3	FWM5-B	5 MM M/S FORM B WASHER
4	FNM6-NT	M6 NULOCK NUT T TYPE
5	FW4-T3	¼ T3 L.P M/S WASHER
6	EVI-003	BONDED FEET-M6 AVM-191
7	ZMA-090	FOLDING PROP HUB
8	FNU4-NT	¼ T EX/THIN TYPE NYLOCK NUT
9	KIT-BST-001	WASHER KIT
10	FBA4-27A	AN4-27A A/C HEX BOLT
11	BST-022	FOLDING PROP BLADE KIT
12	HTW-002	CABLE TIE 140 × 3.6 MM
13	VSC5-001	5 MM SHOCK CORD (0.5M LONG)
14	ZMP-102	NYLON PROP DRIVER
15	FP-003	SAFETY PIN
16	PMC-SB6	6 MM SKIFFY RING
17	ZMS-296	DRIVE PIN
18	FWM5-B	5 MM M/S FORM B WASHER
19	FNM5-NT	M5 NYLOCK NUT T TYPE
20	EVI-010	FOLDING PROP STOPPER
21	ZMS-301	PROPELLER BUSH
22	ZMP-013	WASHER
23	DP-063	PLACARD
24	DTM12-001	LEADING EDGE TAPE

**AFTER MUFFLER ASSEMBLY**

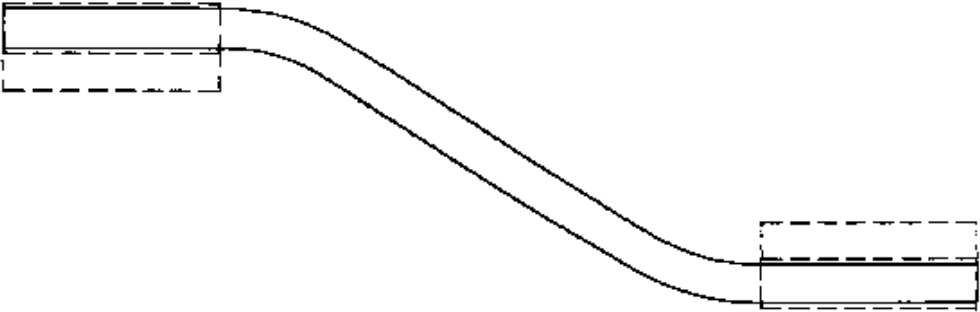
**BST-006**





**FUEL TANK SUPPORT ASSEMBLY**

**BST-012**



**BOOSTER DRIVE SHAFT**

**BST-005**

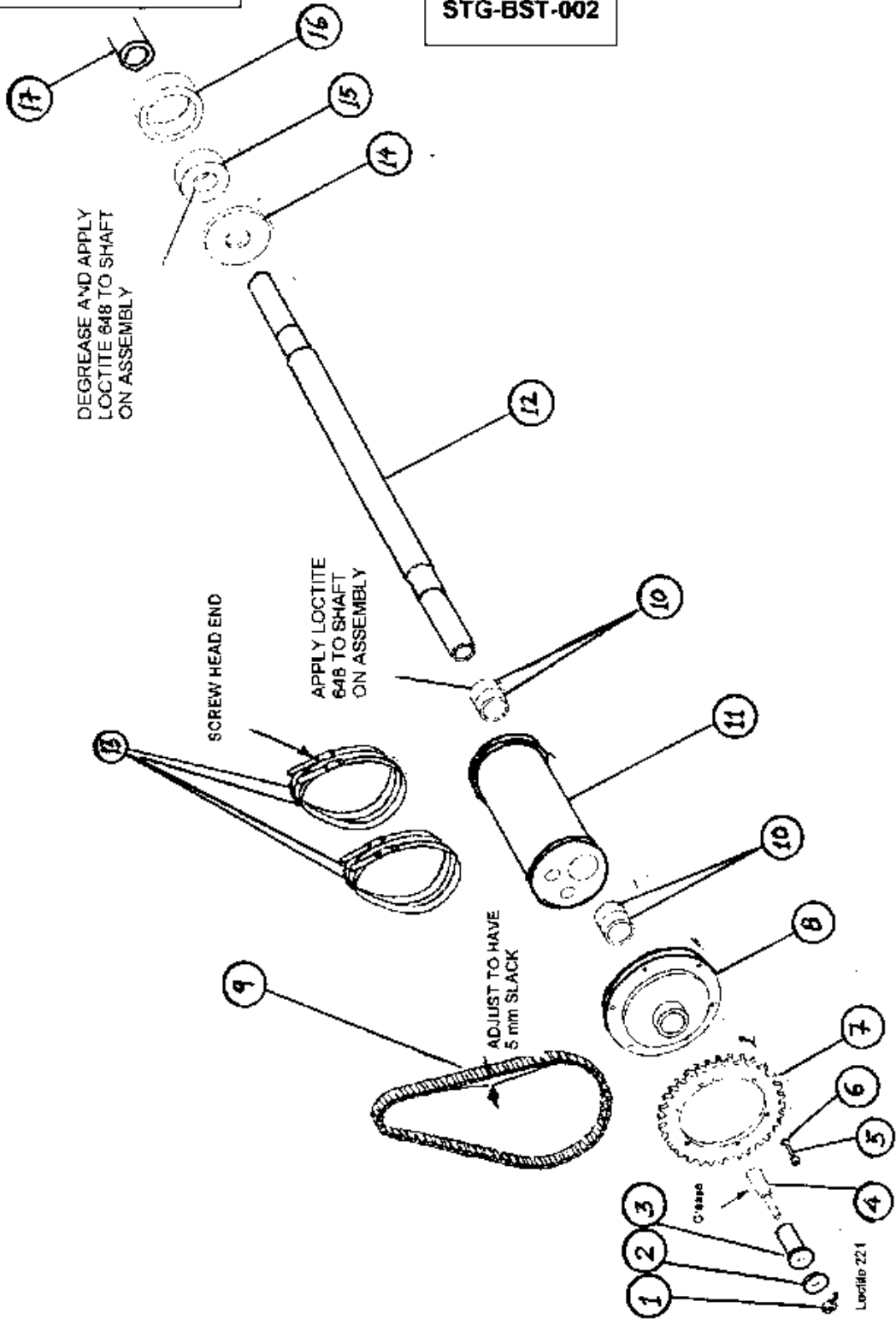
DRILL 8.0 FOR DRIVE PIN SLEEVE, AFTER ASSEMBLY



NOTE - SHAFT MUST BE STRAIGHT TO L/1000

**SHAFT ASSEMBLY**

**STG-BST-002**



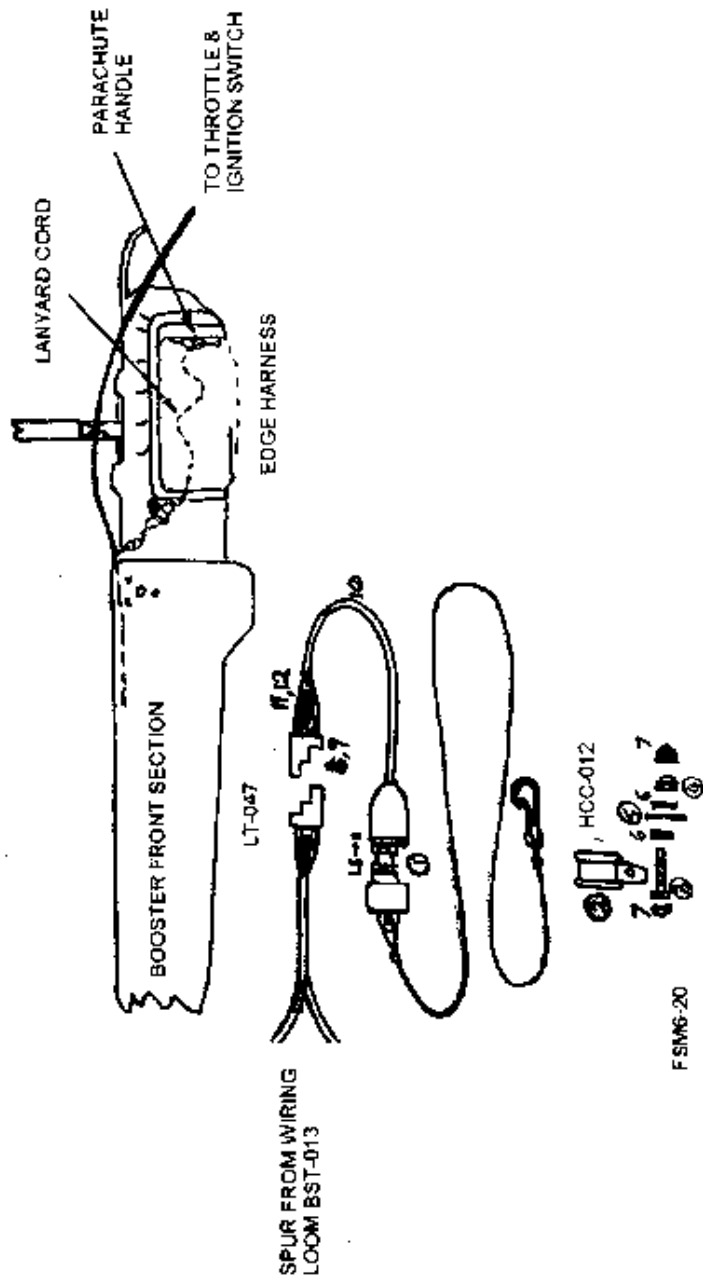
# SHAFT ASSEMBLY

STG-BST-002

ITEM	PART NUMBER	DESCRIPTION
1	FNM10-G8	10 MM PLAIN NUT
2	FWM10-B	10 MM M/S FORM B WASHER
3	ZMA-088	EXPANDER SLEEVE
4	ZMS-089	EXPANDER CONE
5	FCM5-16	M5 × 16 SCKT CAP SCREW
6	FWM5-SW	5 MM S. COIL SQ. SEC.SPR. WASHER
7	ZMS-091	47 TOOTH SPROCKET
8	ZMA-089	SPROCKET HUB
9	CHN-001	DID TYPE 209 CHAIN (66 LINKS, O-RING)
10	BEA-BB-8	BEARING
11	ZMP-103	BEARING CARRIER
12	(SEE PAGE 38/39)	DRIVESHAFT FOR BOOST2ER
13	HCJ-003	70-90 MM JUBILEE CLIP
14	ZSP-290	PROP BEARING THRUST WASHER
15	BEA-BB-9	BEARING
16	ZSP-291	PROPELLER BEARING SLEEVE
17	ZSP-287	PROPELLER THRUST SPACER

**PARACHUTE IGNITION CUTOUT**

**STG-BST-011**



# BOOSTER PLACARD

DP071

ON RH SIDE HANDLE

**PULL LOOP HANDLE TO  
RETRACT GEAR**

ON PROP BLADES (1 SPARE)

## BLADE DRAWING EPB-010

ISSUE:  
BALANCE FACTOR:  
PITCH:  
SERIAL NO:  
INSPECTION/TEST:

ON LEFT HAND SIDE ABOVE HANDLES

**PULL VELCRO HANDLE  
STAGE 1 FOR BRAKE, STAGE  
2 FOR CHOKE.**

**PULL LOOP HANDLE TO  
RETRACT GEAR**

FRONT CENTRE OF SHELL

**WARNING - Do not attempt to rig the aircraft, start the engine or operate the aircraft or its equipment until you have read and fully understood the Operator's and Engine Manual.**

**WARNING - This aircraft is not aerobatic. No whip stalls, wing overs, tail slides, loops, rolls or spins. Maintain positive g loading at all times.**

ON IGNITION SWITCH

**ON OFF**



## SHELL DRAWING COM-006

ISSUE:  
SERIAL NO:  
INSPECTION/TEST:

ON SHELL ABOVE EXHAUST AREA

**WARNING**  
Do not touch the engine when running - some rotating engine parts are exposed. Some parts remain hot for a considerable time after the engine has been switched off. Allow to cool before inspection and before filling tank.

ON SHELL BY FUEL TANK

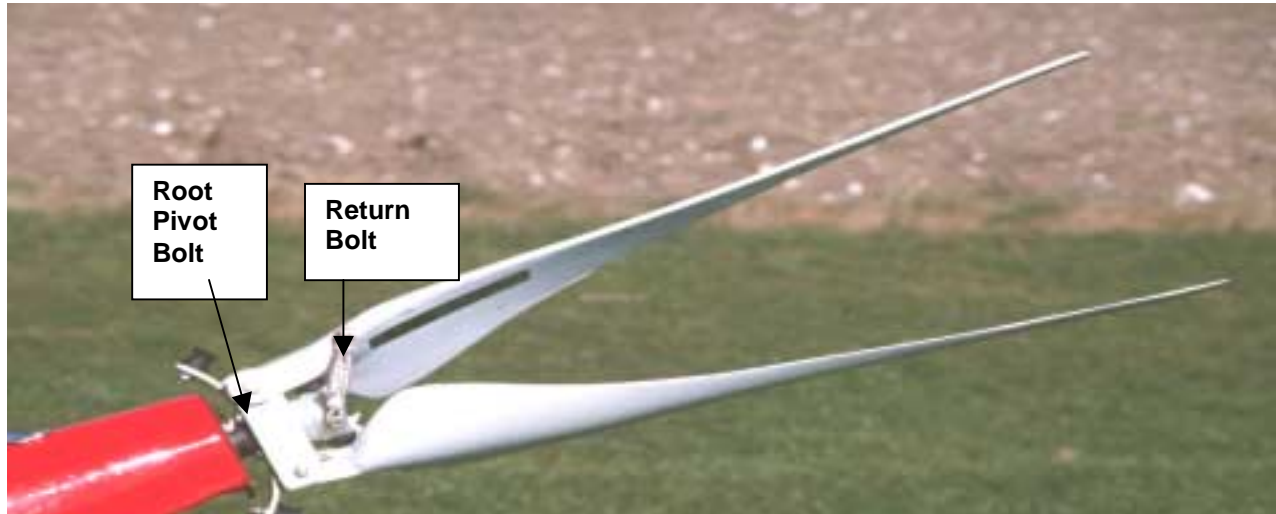
**FUEL CAPACITY 5 LTR**  
**UNLEADED 90+ OCTANE**  
**MIX RATIO 40:1**  
**SYNTHETIC RACING 2 STROKE OIL.**

**DRIVE CHAIN MUST BE LUBRICATED BEFORE FLIGHT USING NON-FLING AEROSOL CHAIN LUBRICANT.**

SPARES

<b>WARNING</b>	-	<b>Hot</b>
<b>WARNING</b>	-	<b>Hot</b>
<b>WARNING</b>	-	<b>Hot</b>
<b>WARNING</b>	-	<b>Hot</b>

## BOOSTER PROPELLER BLADE REPLACEMENT & BALANCING



### Replacement Propeller Blades:

Before replacing a blade, check:

- 1) The condition of the hub for distortion, wear at the bolt holes, cracks.
- 2) The driveshaft for straightness.
- 3) Condition and security of the nylon prop. driver, pin, and shaft attachment sleeve.
- 4) The condition of the other blade – cracks, splits etc.
- 5) Condition of mylar washers and bungees.

### Balance:

Correct balance is absolutely vital. A correctly set up Booster is vibration-free. Vibration causes pilot discomfort as well as causing structure damage through fatigue.

The Booster propeller is balanced by using unequal length return bolts and balancing washers. The return bolts are 6mm diameter, ranging from 35mm to 90mm long. To get an extra balancing range, the short bolt may be titanium and the long 90mm bolt may be increased to 1/4" diameter. (Aluminium must not be used because of corrosion in the carbon blade). The bolt must be degreased with acetone or cellulose thinners and bonded securely in position using 5 minute epoxy (e.g. Devcon or Araldite rapid) coating the entire length of the bolt. 6-8mm shank must protrude for the return bungee.

So that replacement blades can be supplied for any propeller, blades are supplied without the return bolt fitted so that the propeller can be balanced.



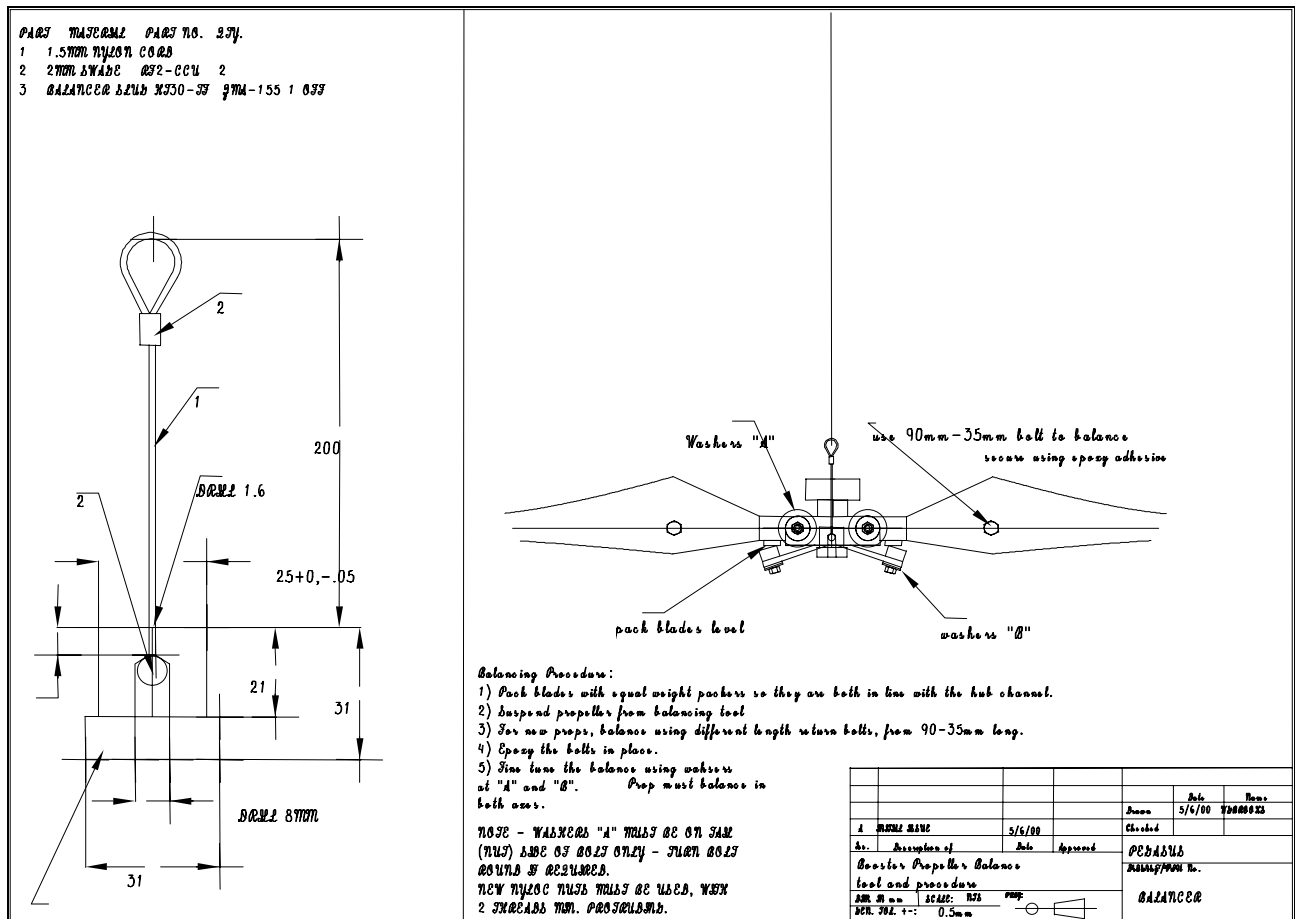
## Procedure:

Assemble the propeller and carefully chock the blade stops using equal weight washers so that the blades are square to the hub. Use the balancing tool part ZMA-155A in calm conditions. See the procedure in the drawing "balancer" below.

Use the unequal weight return bolts to balance the propeller along the blade axis. Fine tuning can be by using up to 2 washers under the blade stop nuts.

Use up to 2 washers under the root pivot bolt nuts to balance across the blade axis. Note the washers MUST be on the threaded end of the bolt so that the 700kg centrifugal force is taken by the plain bolt shank. Turn the bolt round if necessary.

The pivot bolts are NOT intended to rotate. The blades pivot on the stainless steel sleeve. Some light lubricant e.g. WD40 can be used. Mylar face washers must be fitted.



After balancing, test run the propeller in a clear area, away from people, to check rpm and vibration levels. Check the propeller afterwards for security of all fasteners and condition of parts.

If the propeller balance is perfect and vibration still exists, ensure the shaft is straight and the chain is not worn. All shaft bearings must be secure with no play on the shaft. Varying chain tension as the engine turns causes vibration accompanied by a "vibrato" engine note. The correct static rpm is 2250-2400 with a cold engine, falling by around 50rpm warm.

At this rpm range, static thrust is approximately 39-44kg.

**PARTS KIT NO: KIT-BST-001**