

FRONTLINE 933 RIDER ROTARY

LIST OF PARTS

GB

SERIES : UT



TEXTRON
PARTS X PRESS
TURF CARE AND SPECIALTY PRODUCTS

Ransomes Way, Ipswich, England, IP3 9QG

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RANSOMES

TEXTRON
TURF CARE AND SPECIALTY PRODUCTS



INTRODUCTION

ITEM NUMBER

Each part which is identified in the illustrations has an item number. Parts which do not have an item number may not be readily identified in the illustration but are usually closely associated with the immediately adjacent part.

ASSEMBLIES

A complete assembly, e.g. a wheel motor or hydraulic motor or roll assembly, is listed as a complete item with subsequent individual components listed separately.

The assembly is listed under its part number with component parts being listed offset to the right, e.g.:-

ITEM	RANSOMES PART NO.	DESCRIPTION	QTY
1	LMSD798	Roll Assy.	1
2	MBB4490	• Tube	1
3	LMSD926	• End Cap Assy.	2
4	MBB6851	•• End Cap	1
5	H009116	•• Bearing	1
6	MBB2356	•• Seal Housing	1
7	A224016	•• Seal	2
*	A122192	Screw	2

It may not be possible to illustrate every item. With certain items purchased from outside suppliers some component parts may not be available from Ransomes and may need to be specially ordered from the supplier e.g. Volvo hydraulic motor components.

QUANTITIES

Quantities shown are for one assembly or sub-assembly.

USING THE PARTS LIST

Determine the function and application of the part required. Turn to the main index page and select the appropriate section. Locate the part on the illustration and parts list and read off the quantity from the appropriate MODEL column.

NUMERICAL INDEX

This is a summary of all part numbers used in the manual arranged in numerical sequence and showing the page and item number under which the parts appear.

ORDERING OF SPARE PARTS

When ordering replacement parts, it is most important to quote the SERIAL NUMBER of the machine, PART NUMBER, DESCRIPTION and QUANTITY required.



INTRODUCTIE

ILLUSTRATIE-NUMMER

Ieder onderdeel dat in de illustratie wordt weergegeven, is voorzien van een illustratie-nummer. Het is mogelijk dat onderdelen zonder een dergelijk illustratie-nummer, niet onmiddellijk in de illustratie kunnen worden gevonden. Deze behoren echter, over het algemeen, bij het onmiddellijk daarnaast geplaatste onderdeel.

SYSTEMEN

Een compleet systeem, zoals bijvoorbeeld een wiel, een motor, een hydraulische motor of rol, wordt als een compleet illustratie-nummer vermeld. De afzonderlijke componenten worden apart vermeld. Het systeem wordt ook vermeld onder het onderdeelnummer, terwijl onderdelen, iets inspringend naar rechts, zijn vermeld. Bijvoorbeeld:-

ILLUSTRATIE NUMMER	RANSOMES ONDERDEELNR.	BESCHRIJVING	AANT.
1	LMSD798	Rol - compleet	1
2	MBB4490	• Buis	1
3	LMSD926	• Eindkap - compleet	2
4	MBB6851	•• Eindkap	1
5	H009116	•• Lager	1
6	MBB2356	•• Keerringhuis	1
7	A224016	•• Keerring	2
*	A122192	Schroef	2

Het is vaak niet mogelijk om ieder onderdeel te illustreren. Daar bepaalde onderdelen door buitenleveranciers worden toegeleverd, is het mogelijk dat bepaalde onderdelen niet door Ransomes kunnen worden geleverd. Die moeten dan speciaal bij de leverancier worden besteld. Hierbij gaat het bijvoorbeeld om onderdelen van de hydraulische Volvo motor.

AANTALLEN

De vermelde aantallen zijn voor één systeem of sub-systeem.

HET GEBRUIKEN VAN DE ONDERDELENLIJST

Eerst de functie en toepassing van het betreffende onderdeel vaststellen. Vervolgens de pagina met de hoofdindex opslaan en juiste sectie kiezen. Het onderdeel in de illustratie en de onderdelenlijst opzoeken en de hoeveelheid aflezen in de kolom met de titel 'MODEL'.

NUMERIEKE INDEX

Deze index is een samenvatting van alle onderdeelnummers die worden gebruikt in het handboek. Deze onderdeelnummers zijn in numerieke volgorde geplaatst, inclusief het pagina- en illustratie-nummer, waaronder de onderdelen verschijnen.

BESTELLEN VAN VERVANGINGSONDERDELEN

Als vervangingsonderdelen worden besteld, is het uiterst belangrijk dat het SERIENUMMER van de machine, het ONDERDEELNUMMER, de BESCHRIJVING en het VEREISTE AANTAL worden vermeld.

INTRODUCTION

NUMERO D'ARTICLE

Chaque pièce, qui est identifiée sur les illustrations, est accompagnée d'un numéro d'article. Il peut s'avérer difficile d'identifier les pièces ne possédant pas de numéro d'article, mais celles-ci sont généralement étroitement associées à la pièce immédiatement adjacente.

ENSEMBLES

Un ensemble complet, par exemple: un ensemble de moteur de roue, de moteur hydraulique ou de rouleau, est listé en tant qu'article complet et les composants individuels subséquents sont listés séparément. L'ensemble est listé sous son numéro de pièce et les composants sont décalés vers la droite sur la liste, par exemple:

ARTICLE	NO.DE PIECE RANSOMES	DESCRIPTION	QTE
1	LMSD798	Ensemble de rouleau	1
2	MBB1190	• Tube	1
3	LMSD926	• Ensemble de bouchon	2
4	MBB6891	•• Bouchon	1
5	HOO9116	•• Roulement	1
6	MBB2356	•• Logement de joint	1
7	A224016	•• Joint	2
8	A123103	Vis	2

Il se peut que l'illustration de tous les articles ne soit pas possible. Pour certains articles achetés à des fournisseurs externes, il se peut que certains composants ne soient pas disponibles chez Ransomes et que ceux-ci soient commandés spécialement auprès du fournisseur, par exemple: composants de moteur hydraulique Volvo.

QUANTITES

Les quantités indiquées s'appliquent à un ensemble ou sous-ensemble.

UTILISATION DE LA LISTE DE PIECES

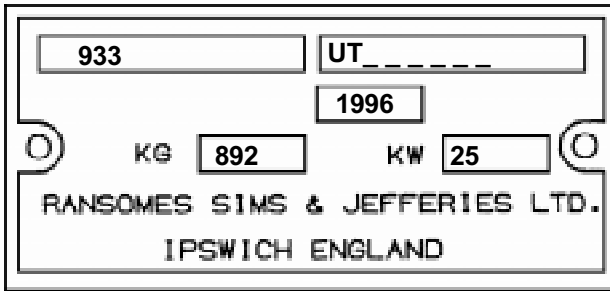
Déterminer la fonction et l'application de la pièce requise. Passer à la page d'index principal et sélectionner la section appropriée. Situer la pièce sur l'illustration et la liste de pièces, puis lire la quantité dans la colonne MODELE appropriée.

INDEX NUMERIQUE

Il s'agit d'un récapitulatif de tous les numéros de pièce utilisés dans le manuel, classés en séquence numérique, et indiquant la page et le numéro d'article sous lesquels les pièces apparaissent.

COMMANDE DES PIECES DE RECHANGE

Lors de la commande des pièces de rechange, il est essentiel de stipuler le NUMERO DE SERIE de la machine, le NUMERO DE PIECE, la DESCRIPTION et la QUANTITE requise.



SPECIFICATIONS

ENGINE SPECIFICATION

Type:	Kubota 25KW (33HP) @ 3000 RPM, 4 cylinder (in line) vertical Diesel engine, 4 stroke, water cooled, 1335cc (81.47 cu.in) with 12V electric start.
Model:	V1305-BBS-EC-1
Maximum Speed:	3000 ± 50 RPM (No load)
Idle Speed:	1500 RPM
Oil Sump Capacity:	6 litres (10.56 Imp.pints) (12.68 US pints)
Firing Order:	1, 3, 4, 2.
Fuel:	No. 2-D Diesel fuel (ASTM D975)

MACHINE SPECIFICATION

DRIVE TRAIN

transmission: Variable displacement pump directly mounted to engine, infinitely variable foot speed control.

Filtration: 10 Micron

Drive: 4 wheel drive for cutting.
2 wheel drive for transport.
15 cu. in. front wheel motors, 12 cu. in. rear wheel motors.

Speeds:

Cutting: 0 - 11km/h (0 - 7 mph) FORWARD
0 - 6km/h (0 -4 mph) REVERSE

Speed:

Transport: 0 - 25km/h (0 - 15mph) FORWARD

Differential lock: Cross-flow parallel drive.

Tyres:

Front - 23 x 10.50 - 12 6 ply rating turf tread
Rear - 20 x 10.00 - 8 6 ply rating turf tread

Pressures:

All tyres 1 kg/cm² (14 p.s.i.)

Brakes:

Service: Hydrostatic braking through traction drive with foot operated self-energizing 270mm x 50mm (10.25" x 1.75") band brakes, on front wheels. Optional individual wheel brakes.

Parking: Foot operated self-energizing 270mm x 50mm (10.25" x 1.75") band brakes, on front wheels.

PTO Drive: Hydraulic gear pump directly mounted to transmission.

CAPACITIES

Cooling System

Capacity: 5litres (8 Imp. pints) (10.5 US pints)
50% Antifreez.

Fuel Tank

Capacity: High density polyethylene
64.4 litres (14 Imp. galls) 17 US galls
Filtration: 10 micron in-line pre filter and cannister filter.

Hydraulic Tank

Capacity: 18.8 litres (4 Imp. galls) 5 US galls
Oil type: Turf Protector (vegetable based)



ELECTRICAL SYSTEM

Charging: 30amp alternator.
 Lights: Optional 2 headlights; indicators.
 Starting: 12 volt with 650amp cold cranking.
 Warning system: Audible alarm for high engine coolant temperature; low engine oil pressure; visual alarm for engine oil pressure; hydraulic oil temperature and charging system fuse and circuit breaker protected.

CONTROLS

Steering: Power steering to rear wheels with rake adjustable steering wheel.
 Deck lift: Single lift lever.
 Throttle: Hand lever.
 Forward/Reverse: Foot pedal control.
 Brake: Foot pedal control.
 PTO: Single electric switch
 4 WD/transport: Single electric switch
 Lights: Single electric switch

INSTRUMENTS

Water temperature gauge
 Fuel level gauge
 Low oil pressure lamp
 High hydraulic oil temperature lamp
 Glow plug indicator lamp
 Alternator lamp

SEAT

Type: High backed vinyl covered; moveable arm rest; adjustable for operators weight and fore and aft position.

DIMENSIONS

Overall width: (transport)
 Tractor with 1.52m (60 in) deck
 1.56 metres (61.25in)

Tractor with 1.60m (63in) deck
 with chute down 1.94 meters (76.55in)
 with chute up 1.75 meters (88.75in)

Tractor with 1.82m (72in) side discharge deck
 with chute down 2.16 meters (85.00in)
 with chute up 1.88 meters (74.00in)

Tractor with 1.82m (72in) rear discharge deck
 1.86 meters (73.00in)

Overall height: 1.35 metres (53in)

Overall length:
 Tractor with 1.52m (60 in) deck 3.14 metres (123.5in)
 Tractor with 1.60m (63in) deck 3.19 meters (125.5in)
 Tractor with 1.82m (72in) deck 3.26 meters (128.5in)

Wheel base: 1.40 meters (55in)

Ground clearance: 16.5 cm (6.5in)

min. turning radius: 4.2cm (16.7in)

Overall weight of machine:
 Tractor with 1.52m (60 in) deck: 1240kg (2735lb)
 Tractor with 1.60m (63in) deck: 1266kg (2790lb)
 Tractor with 1.82m (72in) deck: 1311kg (2890lb)

CUTTING DECKS

Construction: Heavy duty welded steel.
 Deck drive: Hydraulic motor driving single poly vee belt.
 Cutter heads: 31.75mm (1.25in) diameter spindle with double sealed bearings.

Blades:
 1.52m (60 in) deck Three 533mm x 6mm (21in x .25in) heat treated blade.
 1.60m (63in) deck Three 558mm x 6mm (22in x .25in) heat treated blade.
 1.82m (72in) deck Three 635mm x 6mm (25in x .25in) heat treated blade.
 Castor wheels: 11 x 4.00 4pr pneumatic foam filled tubeless tyre.
 Antiscalp rollers:

NOISE EMISSION with 1.52m (60 in) deck

Conforms to the specification of Directive EEC 79/113, 84/558, 87/252, 88/180, 88/181.

Sound Power Level: ???dB(A) LWA (Bystander)
 Sound Pressure Level: ???dB(A) LpA (Operator Ear Level)

NOISE EMISSION with 1.60m (63in) deck

Conforms to the specification of Directive EEC 79/113, 84/558, 87/252, 88/180, 88/181.

Sound Power Level: 105dB(A) LWA (Bystander)
 Sound Pressure Level: 86.1dB(A) LpA (Operator Ear Level)

NOISE EMISSION with 1.82m (72in) deck

Conforms to the specification of Directive EEC 79/113, 84/558, 87/252, 88/180, 88/181.

Sound Power Level: ???dB(A) LWA (Bystander)
 Sound Pressure Level: ???dB(A) LpA (Operator Ear Level)



VIBRATION LEVEL

The machine was tested for whole body and hand/arm vibration levels. The operator was seated in the normal operating position with both hands on the steering mechanism. The engine was running and the cutting device was rotating with the machine stationary.

with 1.52m (60in) deck

Hand / Arm acceleration level : ??? m/s²

Whole body acceleration level

X axis : Below 0.5 m/s²

Y axis : Below 0.5 m/s²

Z axis : Below 0.5 m/s²

with 1.60m (63in) deck

Hand / Arm acceleration level : 0.48 m/s²

Whole body acceleration level

X axis : Below 0.5 m/s²

Y axis : 0.71 m/s²

Z axis : 0.82 m/s²

with 1.82m (72in) deck

Hand / Arm acceleration level : ??? m/s²

Whole body acceleration level

X axis : Below 0.5 m/s²

Y axis : Below 0.5 m/s²

Z axis : Below 0.5 m/s²

RECOMMENDED LUBRICANTS

Engine oil: Should be to MIL-L-2104C or to A.P.I. Classification CE grades and as given in the table below:

Temperature	Oil Viscosity
ABOVE 25°C (77°F)	SAE 30 or 10w-30 10w-40
0°C to 25°C (32°F to 77°F)	SAE 20 or 10w-30 10w-40
BELOW 0°C (32°F)	SAE 10w or 10w-30 10w-40

Hydraulic Oil: 10w-30 or Turf Protector

Grease: Shell Darina R2 or equivalent.

CUTTING PERFORMANCE

60" deck 1.44 ha/hr @ 8kph (3.49 acres/hr @ 5mph)

63" deck 1.52 ha/hr @ 8kph (3.66 acres/hr @ 5mph)

72" deck 1.73 ha/hr @ 8kph (4.18 acres/hr @ 5mph)

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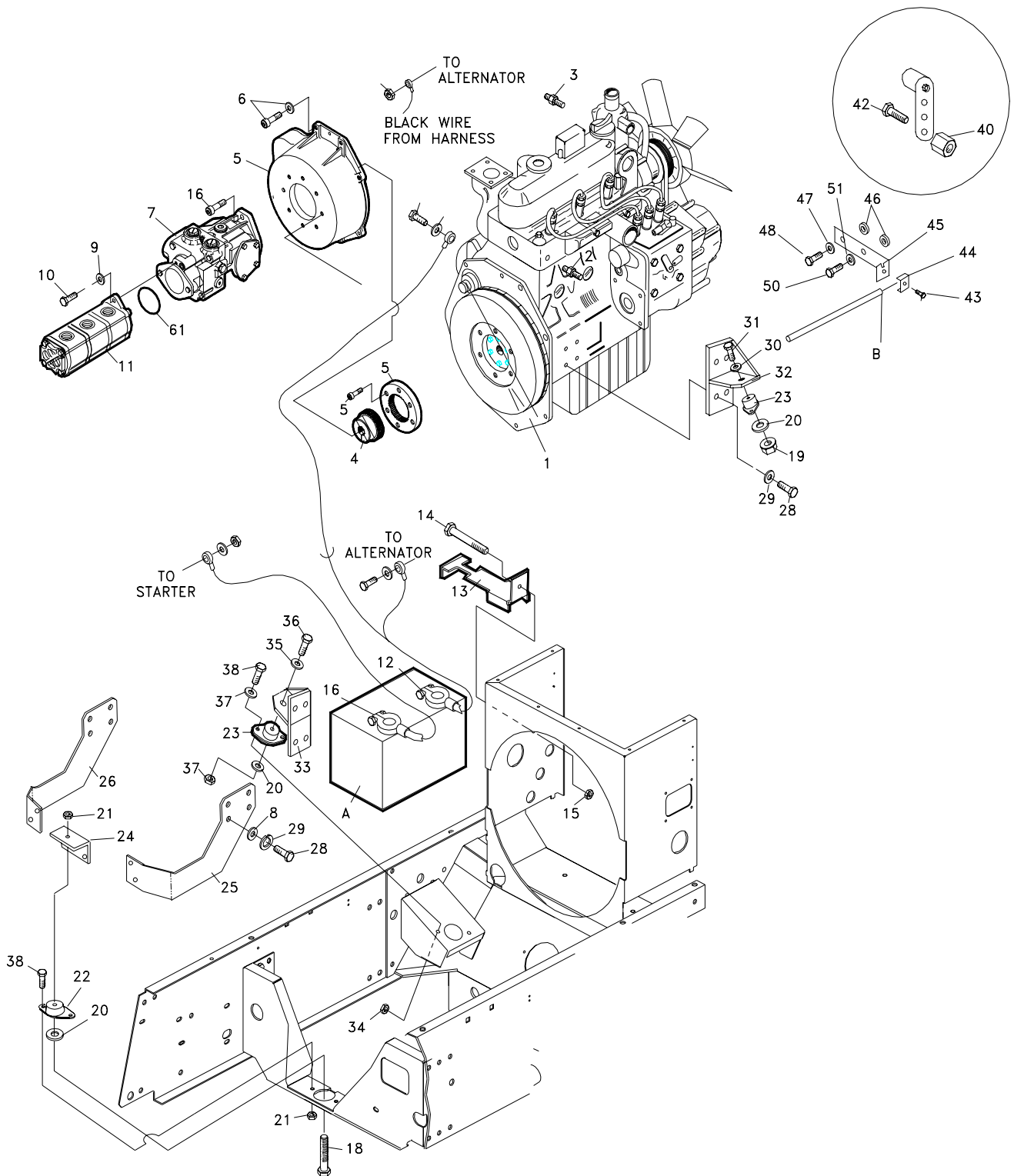
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ITEM	RANSOMES PART NO	DESCRIPTION 	QTY
01	2208078	ENG-KUB V1305B-15	
02	W178059	TEMP SWITCH	
03	W148270	SENDER-TEMP	
04	2208063	COUPLING-15 TOOTH	
05	2208048	BELL HOUSING AND DSCC	
06	A129047	SCREW SOCKET HEAD	
07	W178037	PUMP	
09	GSF2163J	LOCKWSHR-HELICAL 3/8	
10	64123-50	BLT-HEX 3/8-16 X 1	
11	2178227	PUMP-3 STAGE	
12	2218124	CABLE-BATTERY NEG.	
13	2212107	BATTERY-HOLD DOWM	
14	450214	SCREW M10 x 25 HEX HD	
15	450454	NUT M10 VERBUS RIPP	
16	2218089	CABLE-BATTERY POS.	
18	450037	BOLT M10 x 75 HEX HD	
19	GSF2080AC	LOCK NUT	
20	64163-27	WASHER-FLAT	
21	452437	NUT M10 FLANGED NYLOC	
22	2218105	ISOLATOR-VIBRATION	
23	2218106	ISOLATOR-VIBRATION	
24	2212128	MOUNT-TOP MOTOR	
25	2212131	MOUNT-LH MOTOR	
26	2212132	MOUNT-RH MOTOR	
27	450214	SCREW M10 x 25 HEX HD	
28	A119021	M10 X 25 FINE	
29	450412	S.L.WASHER M10	
30	A159926	WASHER 25/64	
31	A109009	BOLT 3/8 UNC x 2.1/2	
32	2216046	WELDMNT-LH ENGINE MOUNT	
33	2216047	WELDMNT-RH ENGINE MOUNT	
34	A139322	NUT	
35	A1594010	WASHER 0.328	
36	64123-54	BOLT-HEX	
37	450391	WASHER	
38	450214	SCREW M10 x 25 HEX HD	
40	172084	CLAMP.	
41	A159401	WASHER 0.328	
42	64123-59	BLT-HEX 5/15-24 X 1/2	
43	A119109	SCREW No.10-24 x 3/4	
44	W022372	B&S CABLE CLAMP	
45	2212156	BRACKET-THROTTLE	
46	A159926	WASHER 25/64	
47	64006-02	LOCKWSHR-HELICAL 5/16	

* Not Illustrated

RANSOMES FRONTLINE 933D

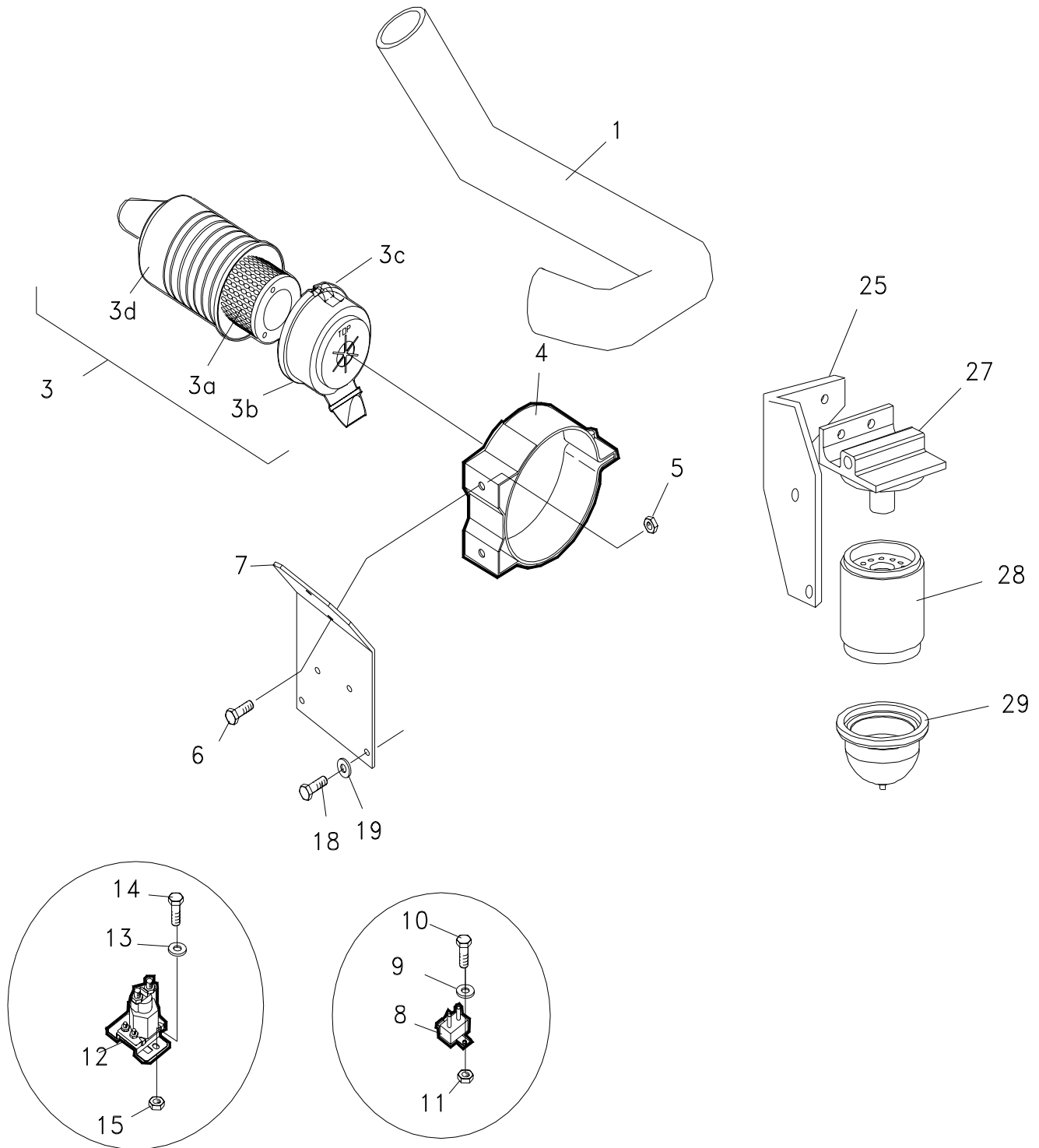


2217004A


ITEM	RANSOMES PART NO	DESCRIPTION 	QTY
48 49 50 A B	A129047 A139325 450214 148057-07	SCREW SOCKET HEAD NUT No.10-24 SCREW M10 x 25 HEX HD BATTERY THROTTLE CABLE	

* Not Illustrated

**RANSOMES
FRONTLINE 933D**

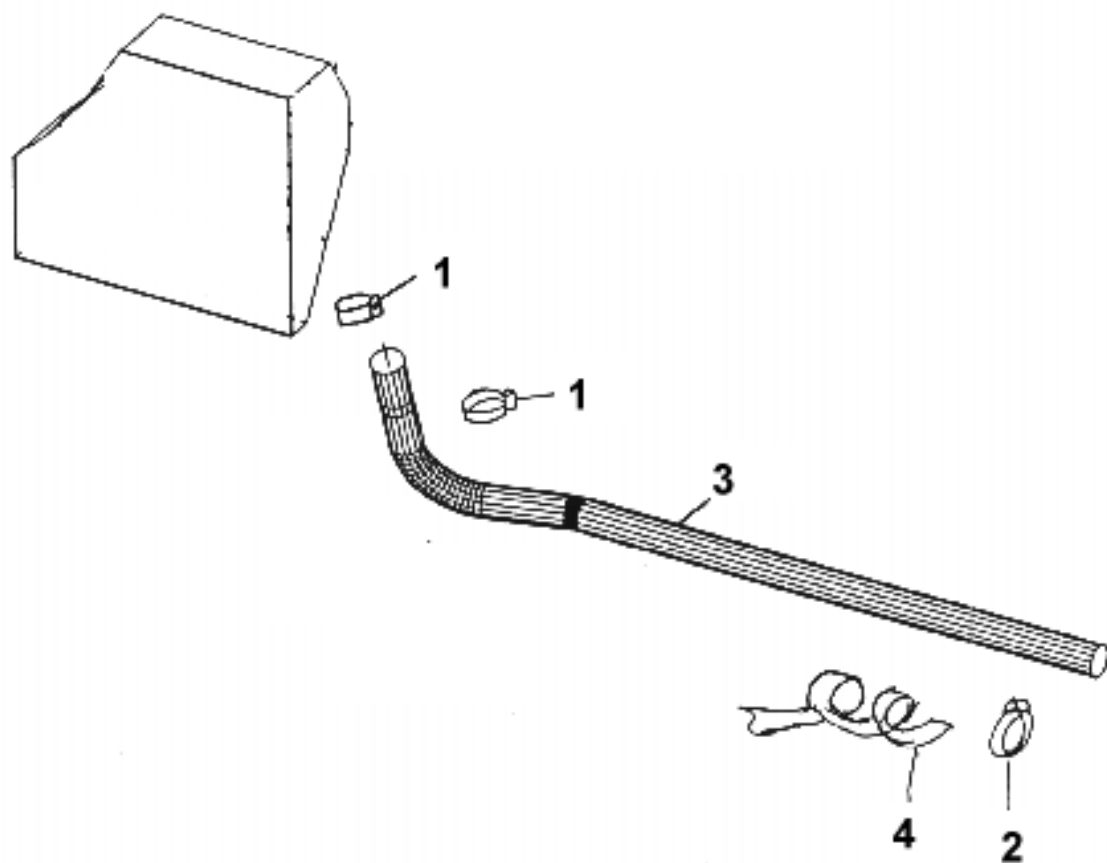



2217005

ITEM	RANSOMES PART NO	DESCRIPTION 	QTY
01	2218104	HOSE-AIR CLEANER	
02*	48383	CLAMP	
03	2198147	AIR CLEANER	
03a	2198147-01	ELEMENT	1
03b	2198147-03	COVER	1
03c	2198147-04	COVER CLIP	2
03d		BODY	1
*	2198147-02	VALVE - DUST UNLOADER	1
04	2198114	CLAMP-AIR CLEANER	
05	452436	NUT M8 FLANGED NYLOC	
06	450191	SCREW M8 x 20 HEX HD	
07	2212149	BRACKET-AIR	
08	A824942	CIRCUIT BREAKER	
09	A159409	WASHER 0.203	
10	450149	SCREW M5 x 12 HEX HD	
11	450376	LOCKNUT-NYLON M5-0.8P	
12	W38665	SOLENOID	
13	450389	WASHER M6	
14	450170	SCREW M6 x 16 HEX HD	
15	452435	NUT M6 FLANGED NYLOC	
16*	68371-5121-0	FUEL PUMP EX KUBOTA	
17*	452692	SCREW M6 x 12 HEX TAPTITE (FOR FUEL FILTER)	
18	450030	BOLT M10 x 40 HEX HD (ITEM 7 TO BELL HOUSING)	
19*	GSF2163J	LOCKWSHR M10 (FOR ITEM 18)	
20	450391	WASHER (FOR ITEM 18)	
21	450193	SCREW M8 x 30 HEX HD (ITEM 7 TO BELL HOUSING)	
22	64006-02	LOCKWSHR-HELICAL 5/16	
23	BAM3044	SPACER (ITEM 7 TO ENGINE)	
24	73018A	SPACER-EYEBOLT (ITEM 7 TO ENGINE)	
25	2212150	BRACKET-WATER SEPERATOR	
26	450191	SCREW M8 x 20 HEX HD (FOR ITEM 27 TO 25)	
27	W178081	FILTER HEAD	
28	W178078	COALESER FILTER	
29	W178077	SIGHT BOWL	
30*	48386-03	FITTING - BARB 1/4NPT X 5/16 OD (FOR ITEM 27)	
31*	88042-02	CLAMP 5/16 (FOR ITEM 32 TO 39)	
32*	148263	FUEL HOSE-5/16 X 52 LONG	
33*	148263	FUEL HOSE-5/16 X 52 LONG	
34*	148263	FUEL HOSE-5/16 X 52 LONG	
35*	148263	FUEL HOSE-5/16 X 52 LONG	
39*	148264	FUEL HOSE-FUEL 3/16 X 40 (RETURN TO TANK)	

* Not Illustrated

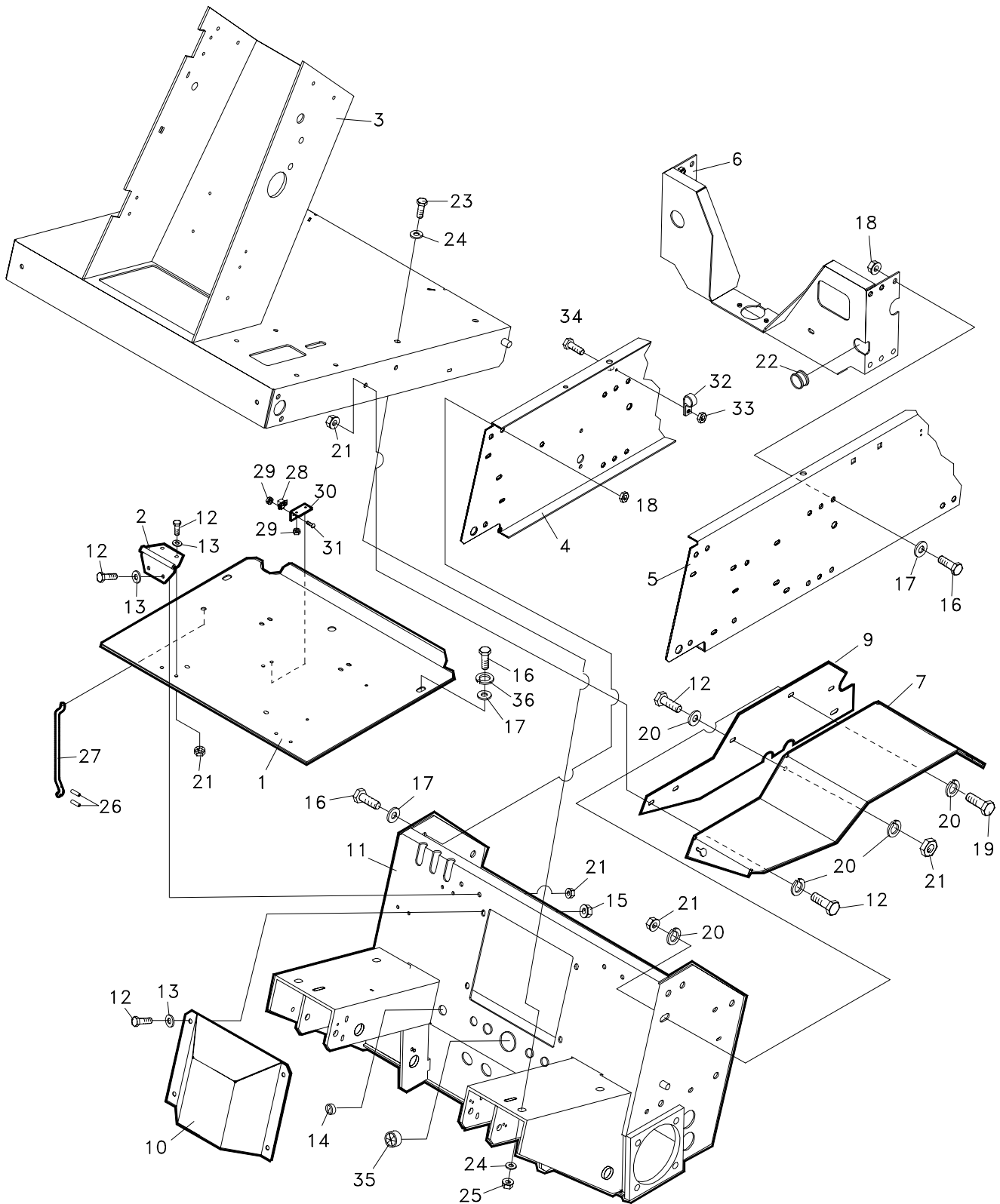
**RANSOMES
FRONTLINE 933D**



ITEM	RANSOMES PART NO	DESCRIPTION 	QTY
01	108094-01	CLAMP	2
02	48319-01	CLAMP	1
03	2218102	EXHAUST PIPE	1
04	2218122	INSULATION	AR

* Not Illustrated


RANSOMES FRONTLINE 933D



2217006

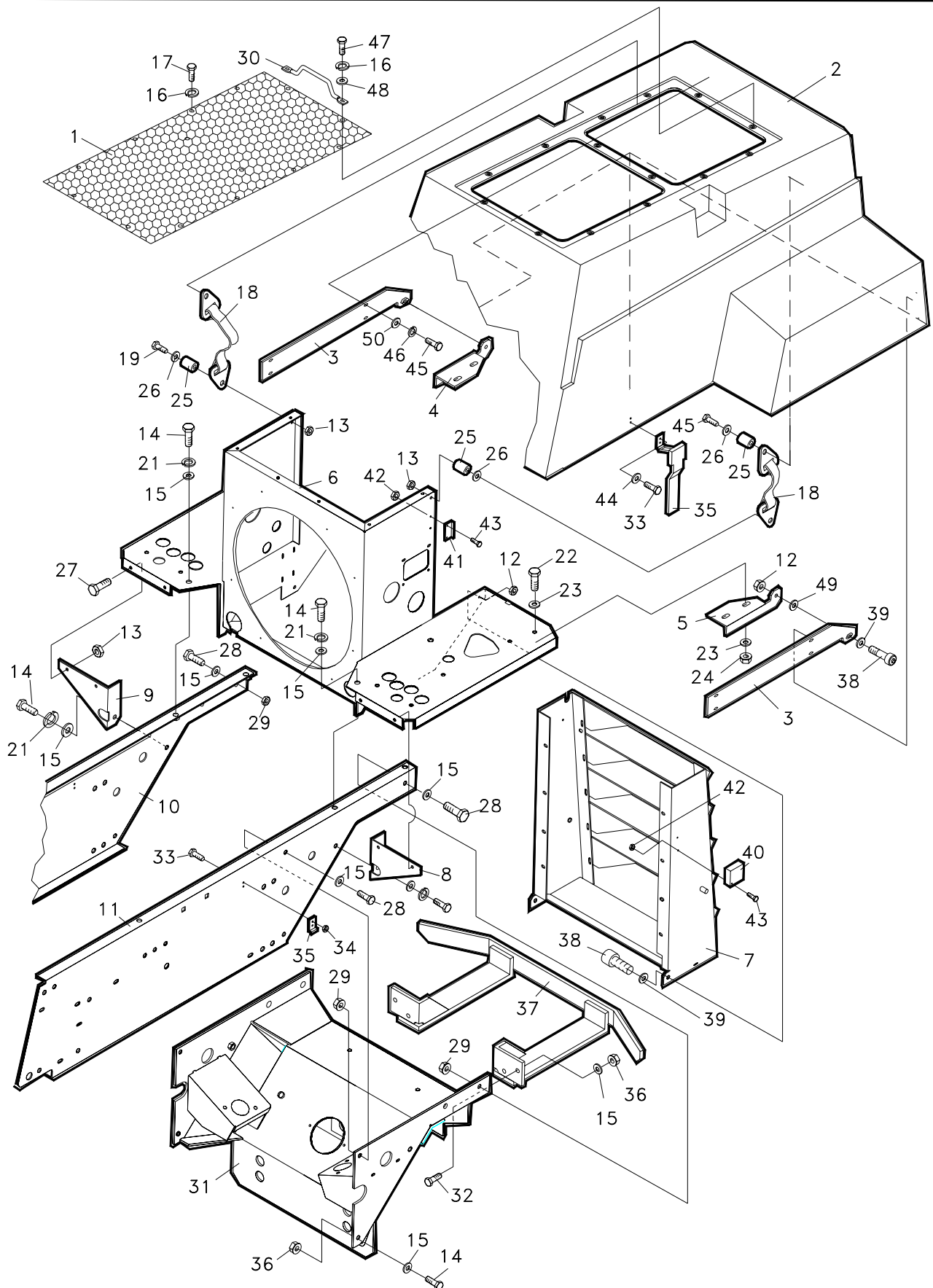
FRONT FRAME

LIST OF PARTS

ITEM	RANSOMES PART NO	DESCRIPTION 	QTY
3-01	2212048	PLATE-SEAT MTG	
3-02	MBG2013	HINGE.	
3-03	2216004	WELDMNT-TOWER	
3-04	2216027	WELDMNT-RH FRAME RAIL	
3-05	2216028	WELDMNT-LH FRAME RAIL	
3-06	2216002	WELDMNT-BULKHEAD	
3-07	2212079	FENDER-LH	
3-08	2212083	FENDER-RH	
3-09	2212082	BACK-PLATE FENDER	
3-10	2212064	COVER-ACCESS	
3-11	2216001A	FRONT AXLE	
3-12	450191	SCREW M8 x 20 HEX HD	
3-13	450390	WASHER M8	
3-14	148034-06	GROMMET - INSULATION	
3-15	452436	NUT M8 FLANGED NYLOC	
3-16	450241	SCREW M12 x 30 HEX HD	
3-17	450392	WASHER M12	
3-18	452438	NUT M12 FLANGED NYLOC	
3-19	450193	SCREW M8 x 30 HEX HD	
3-20	001594010	WASHER 0.328	
3-21	452436	NUT M8 FLANGED NYLOC	
3-22	W148034-01	INSUL GROMMET 1 I/D	
3-23	450214	SCREW M10 x 25 HEX HD	
3-24	450391	WASHER M10	
3-25	452437	NUT M10 FLANGED NYLOC	
3-26	64061-04	ROLL PIN	
3-27	W143036	SUPPORT ROD	
3-28	W138040	CLIP - HOOD ROD	
3-29	001393400	NUT No.6-32	
3-30	W142007	BRKT - ROD CLIP	
3-31	64152-21	6-32x1/2LG RD HD SCREW	
3-32	48228-05	CLIP-CABLE	
3-33	64229-01	LOCK NUT-NYLON 1/4-20	
3-34	001099002	BOLT 1/4 x 1/2	
3-35	2218084	GROMMET	
3-36	64006-05	LOCKWSHR-HELICAL 1/2	

* Not Illustrated

RANSOMES FRONTLINE 933D

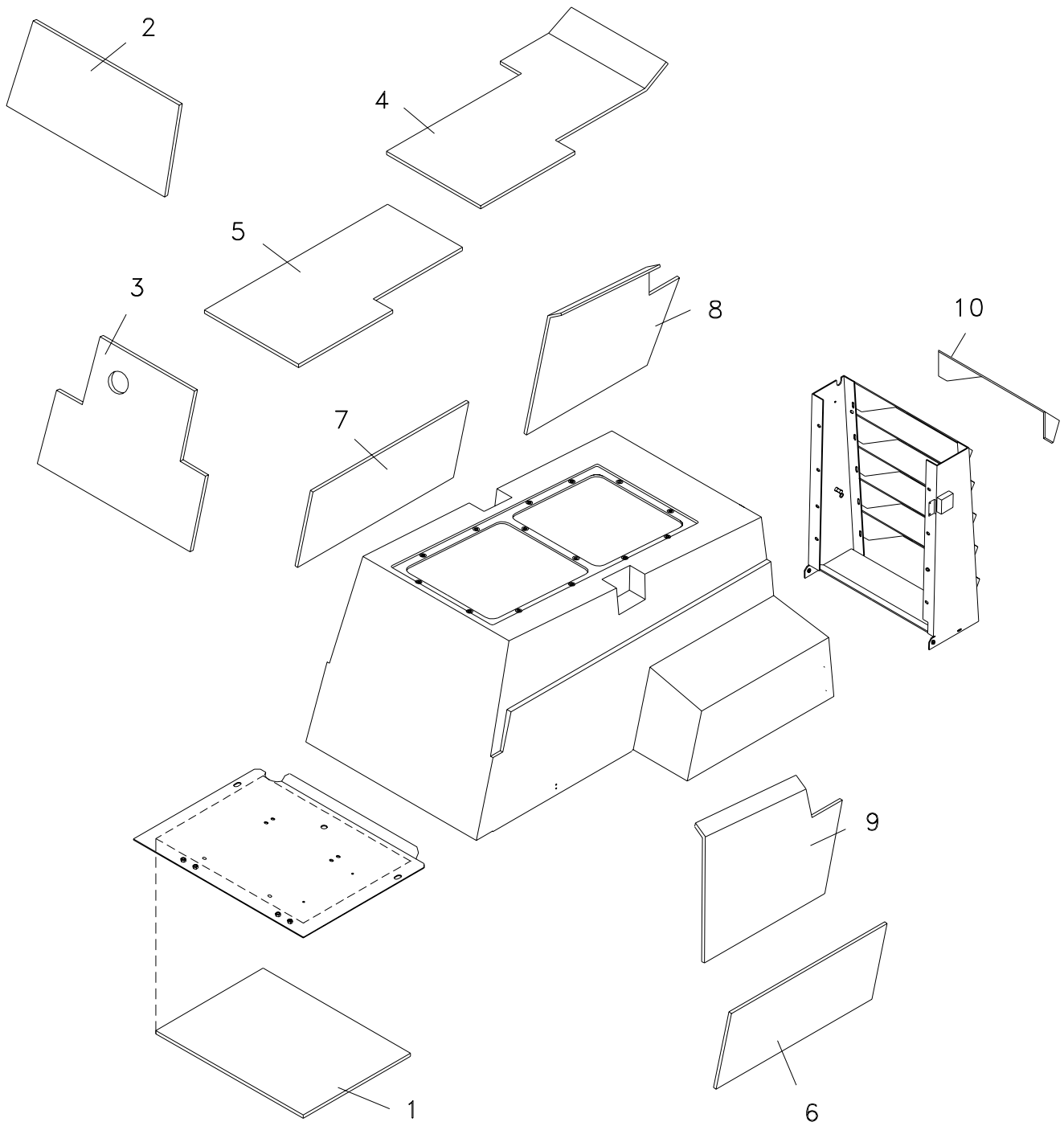


2217007


ITEM	RANSOMES PART NO	DESCRIPTION 	QTY
4-01	2212072	SCREEN - HOOD	
4-02	2218000	HOOD-PLASTIC	
4-03	2212050	HINGE PLATE	
4-04	2212054	HINGE-ADJ.RH	
4-05	2212051	HINGE-ADJ.LH	
4-06	2216008	WELDMNT-FAN SHROUD	
4-07	2216009	WELDMNT-RADIATOR SUPPORT	
4-08	2212046	GUSSET - LH	
4-09	2212045	GUSSET - RH	
4-12	GSF2080AC	LOCK NUT	
4-13	452436	NUT M8 FLANGED NYLOC	
4-14	450241	SCREW M12 x 30 HEX HD	
4-15	450392	WASHER M12	
4-16	64006-01	LOCKWSHR-HELICAL 1/4	
4-17	450168	SCREW M6 x 12 HEX HD	
4-18	2218083	LANYARD	
4-19	450191	SCREW M8 x 20 HEX HD	
4-20	GSF2080AC	LOCK NUT	
4-21	64006-05	LOCKWSHR-HELICAL 1/2	
4-22	450214	SCREW M10 x 25 HEX HD	
4-23	450391	WASHER M10	
4-24	452437	NUT M10 FLANGED NYLOC	
4-25	113006-01	SPACER IDLER	
4-26	001599272	WASHER 21/64	
4-27	450192	SCREW M8 x 25 HEX HD	
4-28	450239	SCREW M12 x 20 HEX HD	
4-29	452438	NUT M12 FLANGED NYLOC	
4-30	MBG2637	TANK TUBE	
4-31	2216006	REAR AXLE SUPPORT	
4-32	450048	BOLT M12 x 40 HEX HD	
4-33	450149	SCREW M5 x 12 HEX HD	
4-34	450376	LOCKNUT-NYLON M5-0.8P	
4-35	W178142	LATCH	
4-36	452438	NUT M12 FLANGED NYLOC	
4-37	2216033	WELDMNT-BUMPER	
4-38	64166-17	BLT-SHLDR 3/8-16 X 1.12	
4-39	001599450	WASHER 33/64	
4-40	2218076	LATCH-OVER CENTER	
4-41	2218075	LATCH-OVER CENTRE	
4-42	W64025-29	NUT	
4-43	001191140	SCREW RD HD NO8-32 X 1/2	
4-44	64002-02	LOCKWSHR-TOOTH EXTERNAL	
4-45	450190	SCREW M8 x 16 HEX HD	
4-46	64006-02	LOCKWSHR-HELICAL 5/16	

* Not Illustrated


**RANSOMES
FRONTLINE 933D**



2217008

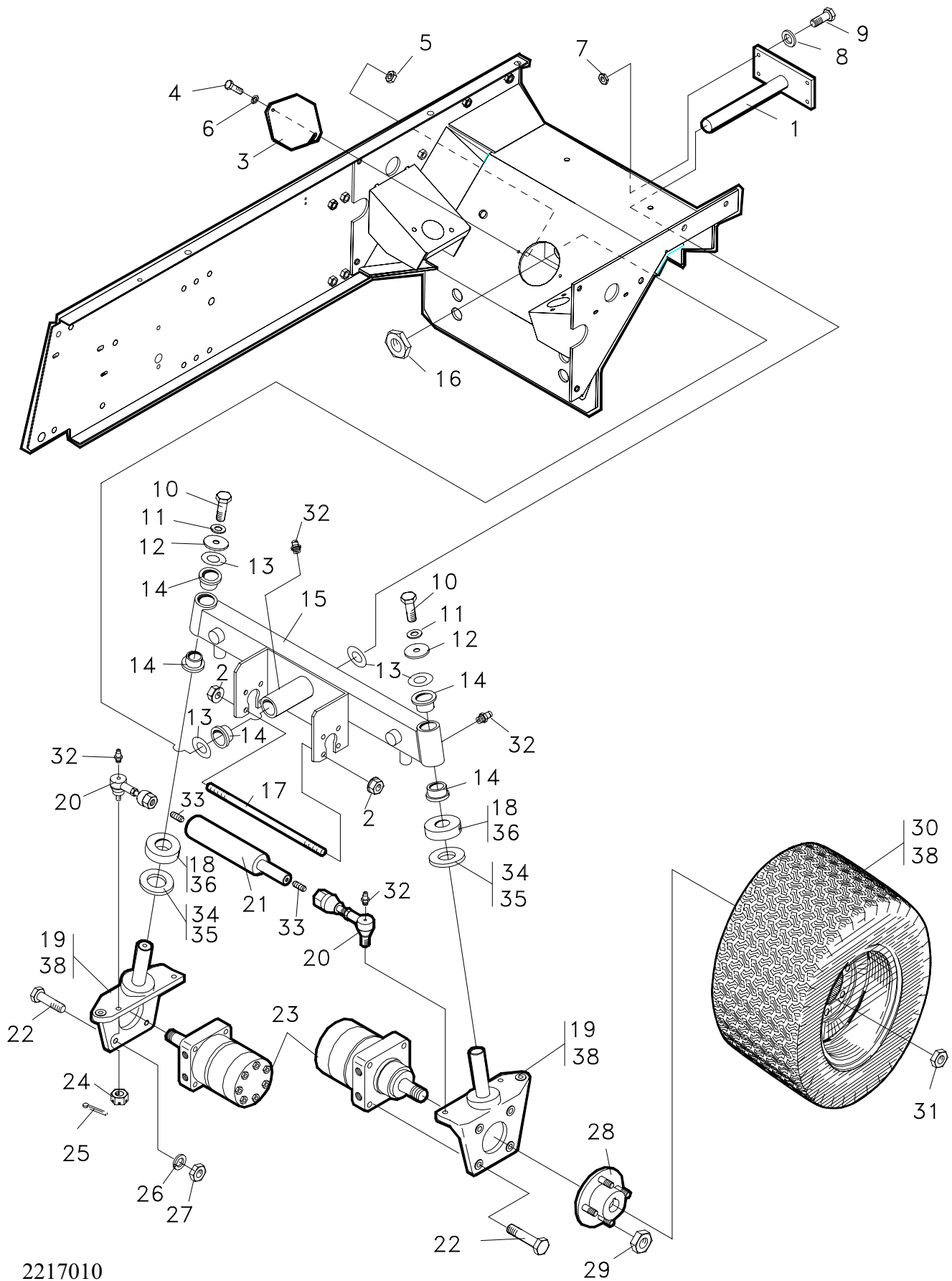
ITEM	RANSOMES PART NO	DESCRIPTION 	QTY
5-01	2218112	INSULATION-SEAT PLATE	
5-02	2218113	INSULATION-HOOD REAR	
5-03	2218118	INSULATION-INTERIOR HOOD	
5-04	2218119	INSULATION-EXTERIOR HOOD	
5-05	2218120	INSULATION-HOOD TOP	
5-06	2218117	INSULATION-INTERIOR LH	
5-07	2218116	INSULATION-INTERIOR RH	
5-08	2218114	INSULATION-HOOD LH	
5-09	2218115	INSULATION-HOOD RH	

* Not Illustrated

ITEM	RANSOMES PART NO	DESCRIPTION 	QTY
6-01	W148141-03	MOTOR	
6-02	64123-90	BOLT-HEX 1/2-20X2	
6-03	W178013	BRAKE	
6-04	GSF2080AC	LOCK NUT	
6-05	172060	BRAKE DRUM	
6-06	W141009	HUB.	
6-07	64140-1	COTTER PIN 1/8 X 1	
6-08	001302910	NUT 1/2 UNF	
6-09	W2178193	WHEEL 23 x 10.50-12.6pr	
6-10	001009348	WHEEL BOLT TAPER HD 1/2	
6-11	64123-15	BLT-HEX 3/8-16 X 3/4	
6-12	GSF2163J	LOCKWSHR-HELICAL 3/8	
6-13	001791197	SNAP RING 0.375	
6-14	64166-17	BLT-SHLDR 3/8-16 X 1.12	
6-15	001599688	WASHER .380/.390	
6-16	699536778	WASHER	
6-17	009063080	SPRING EXTENSION	
6-18	2196143	WELDMNT-BRAKE ARM	
6-19	2196142	WELDMNT-BRAKE	
6-20	64166-7	SHOULDER BOLT	
6-21	001599719	WASHER 1/2	

* Not Illustrated


**RANSOMES
FRONTLINE 933D**



2217010

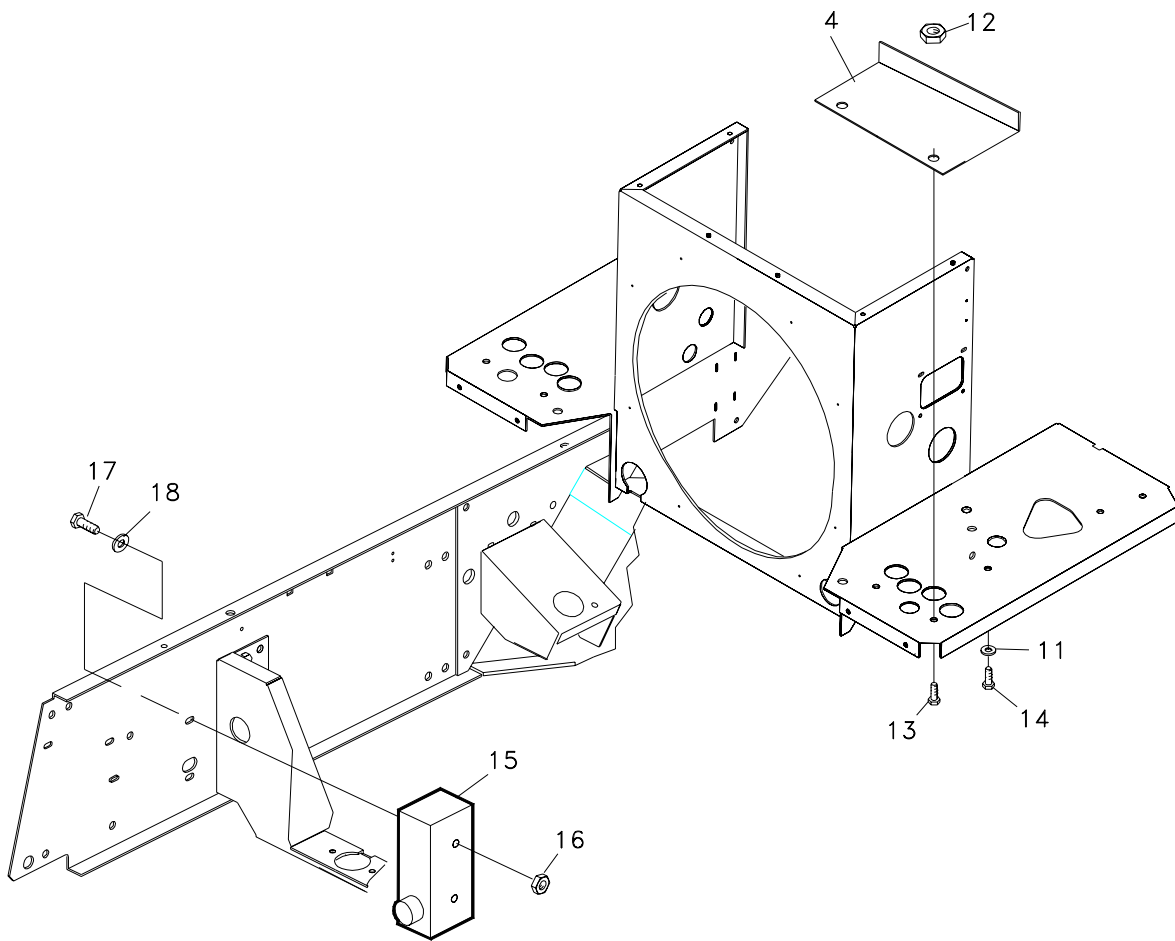
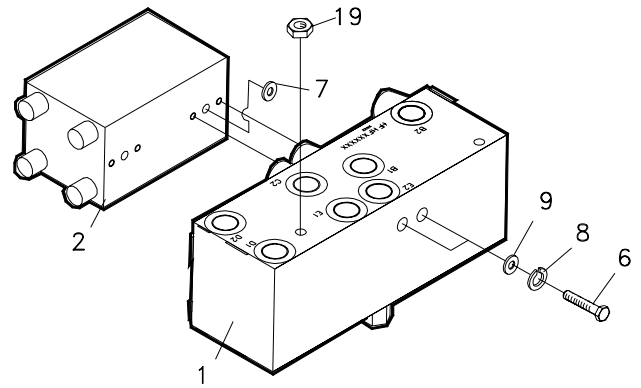
REAR AXLE

LIST OF PARTS


ITEM	RANSOMES PART NO	DESCRIPTION 	QTY
7-01	W176078	PIVOT PIN	
7-02	001393028	NUT 3/8 UNC	
7-03	W142126	COVER DRAIN	
7-04	450000	BOLT M6 x 25 HEX HD	
7-05	452435	NUT M6 FLANGED NYLOC	
7-06	450389	WASHER M6	
7-07	452436	NUT M8 FLANGED NYLOC	
7-08	450390	WASHER M8	
7-09	450191	SCREW M8 x 20 HEX HD	
7-10	64123-15	BLT-HEX 3/8-16 X 3/4	
7-11	GSF2163J	LOCKWSHR-HELICAL 3/8	
7-12	64163-17	WASH 25/64 X 2 X 11GA	
7-13	62464-4A	WASHER-THRUST 1.25	
7-14	W108003	BEARING	
7-15	2216007	WELDMNT-REAR AXLE	
7-16	001393820	NUT	
7-17	W173033	ROD	
7-18	W178018	BEARING	
7-19	2211001	MOTOR MOUNT	
7-20	W178128	STEER LINK	
7-21	W148404	CYLINDER	
7-22	64123-31	BLT-HEX 1/2-13 X 3	
7-23	W148141-02	WHEEL MOTOR 12cu	
7-24	001302900	NUT 1/2 UNF	
7-25	64140-1	COTTER PIN 1/8 X 1	
7-26	64006-05	LOCKWSHR-HELICAL 1/2	
7-27	64025-19	NUT-HEX 1/2-13	
7-28	W106152	HUB	
7-29	001393860	NUT 1 UNEF	
7-30	008162360	WHEEL AND TYRE ASSY	
7-31	001341110	WHEEL NUT A134111	
7-32	85010N	STRAIGHT ZERK FITTING	
7-33	W143069	STUD - CYLINDER	
7-34	W173042	SPACER	

* Not Illustrated

**RANSOMES
FRONTLINE 933D**

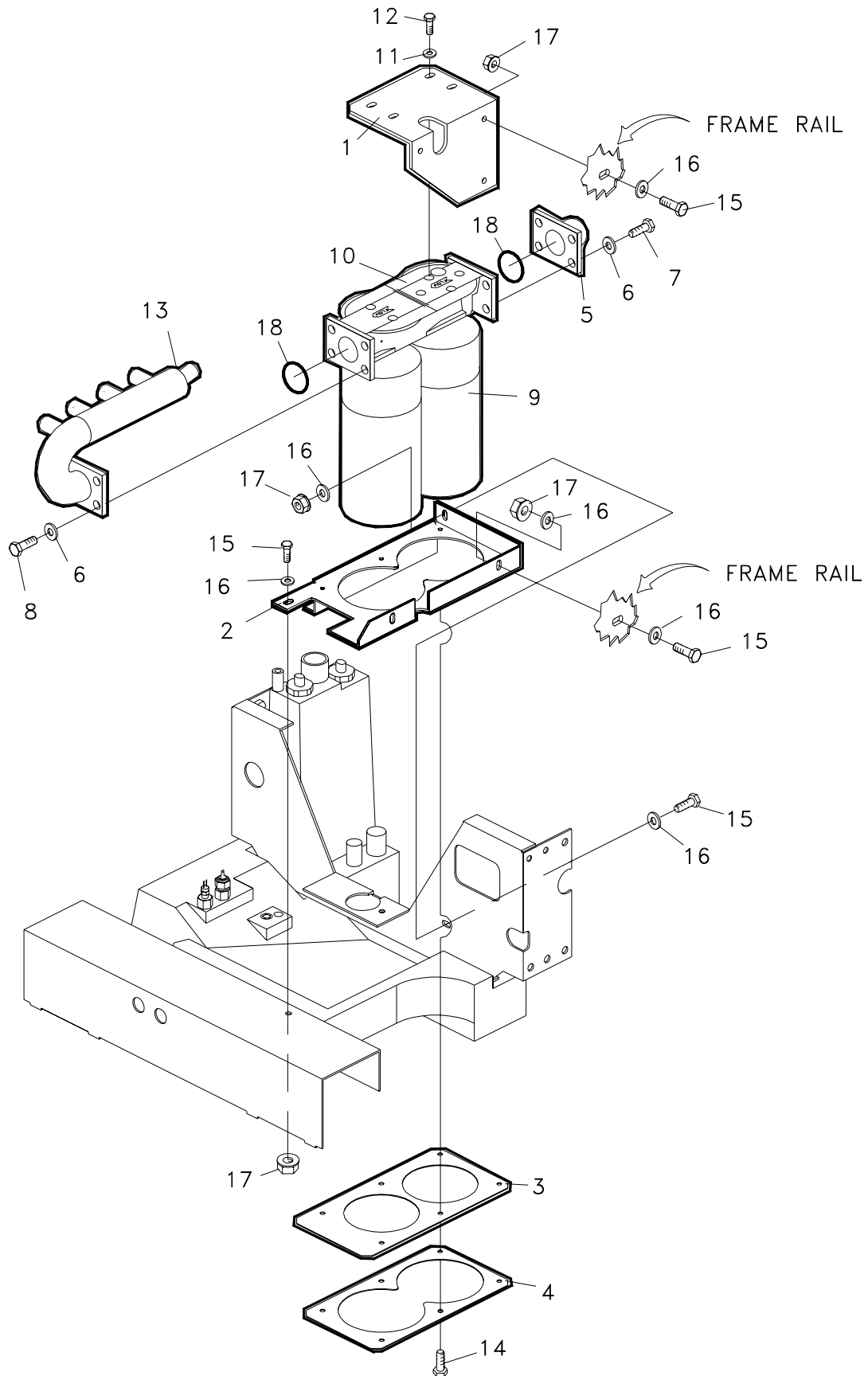


2217011


ITEM	RANSOMES PART NO	DESCRIPTION 	QTY
8-01	2218001	VALVE-4 WHEEL DRIVE	
8-02	2178213	FLOW DIVIDER	
8-04	2212145	PLATE - FENDER	
8-06	64123-207	BOLT-HEX 5/16-18 X 5	
8-08	64006-02	LOCKWSHR-HELICAL 5/16	
8-09	001594010	WASHER 0.328	
8-11	450391	WASHER M10	
8-12	452437	NUT M10 FLANGED NYLOC	
8-13	450213	SCREW M10 x 20 HEX HD	
8-14	456110579	BOLT-HEX GSF2093FR	
8-15	W178099	DECK VALVE	
8-16	GSF2080AC	LOCK NUT	
8-17	451111360	BOLT 3/8 UNC X 4 LONG	
8-18	001599688	WASHER .380/.390	
8-19	001393028	NUT 3/8 UNC	

* Not Illustrated

**RANSOMES
FRONTLINE 933D**

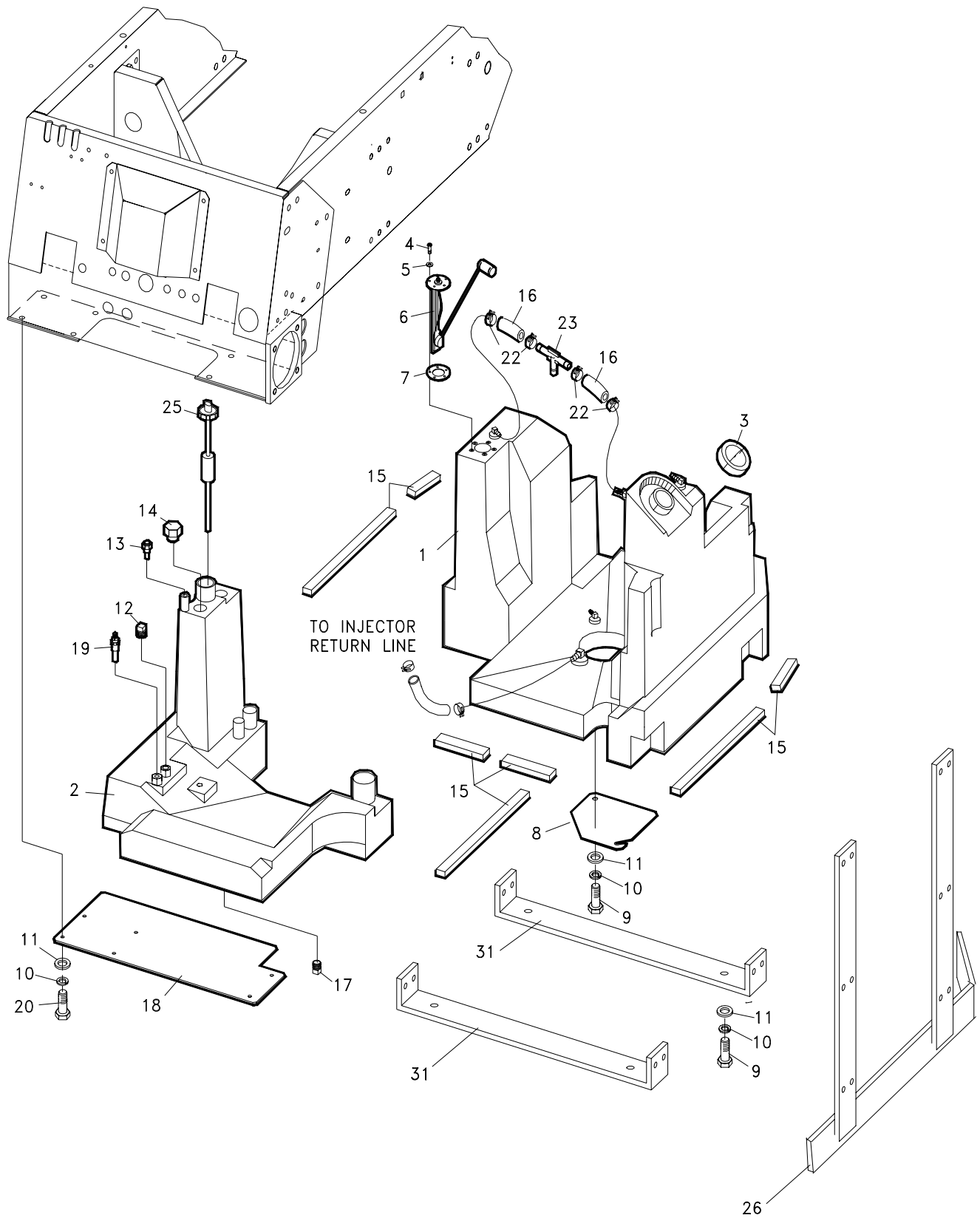


2217012


ITEM	RANSOMES PART NO	DESCRIPTION 	QTY
9-01	2212075	BRACKET-FILTER HEAD	
9-02	2212078	BAFFLE-FILTER HEAD	
9-03	2218043	SEAL-FILTER BAFFLE	
9-04	2212074	PLATE-FILTER BAFFLE	
9-05	W178043	TUBE	
9-06	64006-05	LOCKWSHR-HELICAL 1/2	
9-07	64123-73	SCREW 1/2 UNC X 1 LONG	
9-08	64123-39	BOLT	
9-09	W178025	OIL FILTER ELEMENT	
9-10	W178024	FILTER HEAD	
9-11	GSF2163J	LOCKWSHR-HELICAL 3/8	
9-12	64123-50	BLT-HEX 3/8-16 X 1	
9-13	2218107	MANIFOLD-INLET	
9-14	452701	SCREW M8 x 16 HEX TAPTITE	
9-15	450193	SCREW M8 x 30 HEX HD	
9-16	450390	WASHER M8	
9-17	452436	NUT M8 FLANGED NYLOC	
9-18	W158061-05	O RING	

* Not Illustrated

RANSOMES FRONTLINE 933D

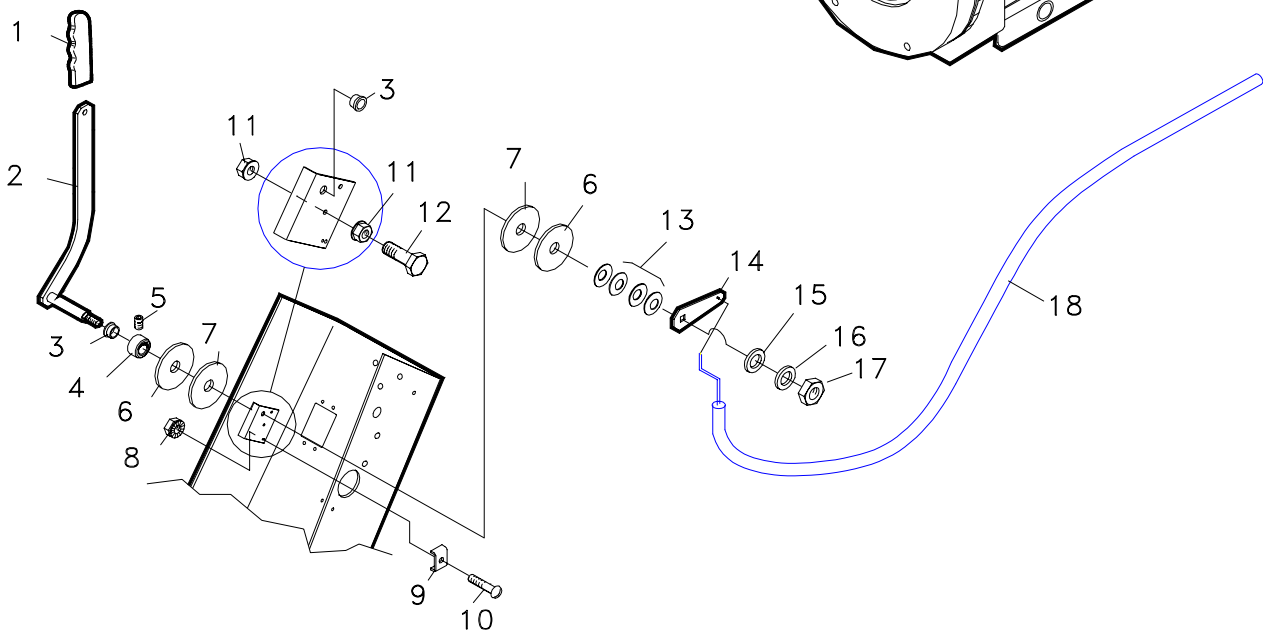
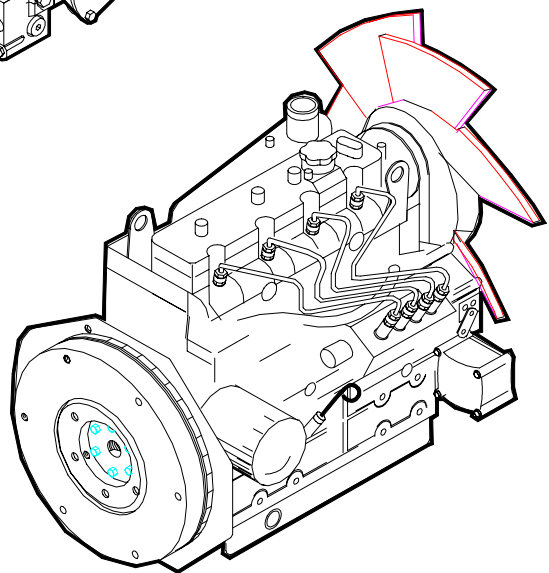
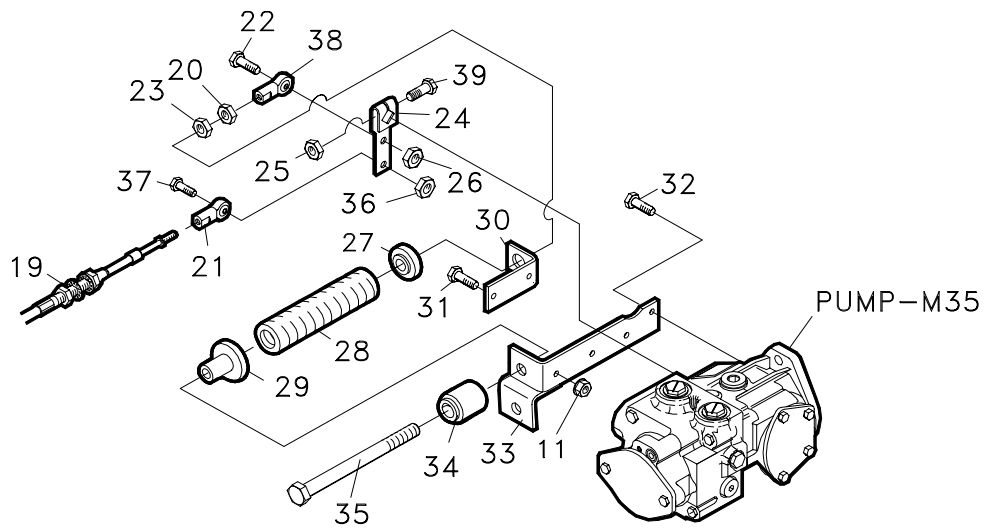


2217013a

ITEM	RANSOMES PART NO	DESCRIPTION 	QTY
01	2218012	TANK-FUEL	
02	2218011	RESERVOIR-HYD.	
03	2218078	CAP-FUEL TANK	
04	A119007	SCREW No.10 x 1/2	
05	64006-02	LOCKWSHR-HELICAL 5/16	
06	2218046	SENDER-FUEL LEVEL	
07	W148081	GASKET	
08	2212087	FUEL-TANK ACCESS	
09	450214	SCREW M10 x 25 HEX HD	
10	64006-06	LOCKWASHER HELICAL 7/16	
11	450391	WASHER M10	
13	148027	BREATHER	
15	W38471	FOAM	
16	09007-11	HOSE	
17	W108029	PLUG	
18	2212076	SUPPORT-HYD RSEVOIR	
19	2208083	SWITCH TEMPERATURE	
20	450391	3/8 WASHER	
21	450215	SCREW M10 x 30 HEX HD	
25	2218079	GAUGE-OIL	
25	A159905	WASHER 33/64	
26	MBF1028	SKID BAR LH	
27*	MBF1027	SKID BAR RH	
28*	450048	BOLT M12 x 40 HEX HD	
29*	64006-05	LOCKWSHR-HELICAL 1/2	
29*	450412	S.L.WASHER M10	
31	2216037	WELDMNT-TANK SUPPORT	

* Not Illustrated

RANSOMES FRONTLINE 933D

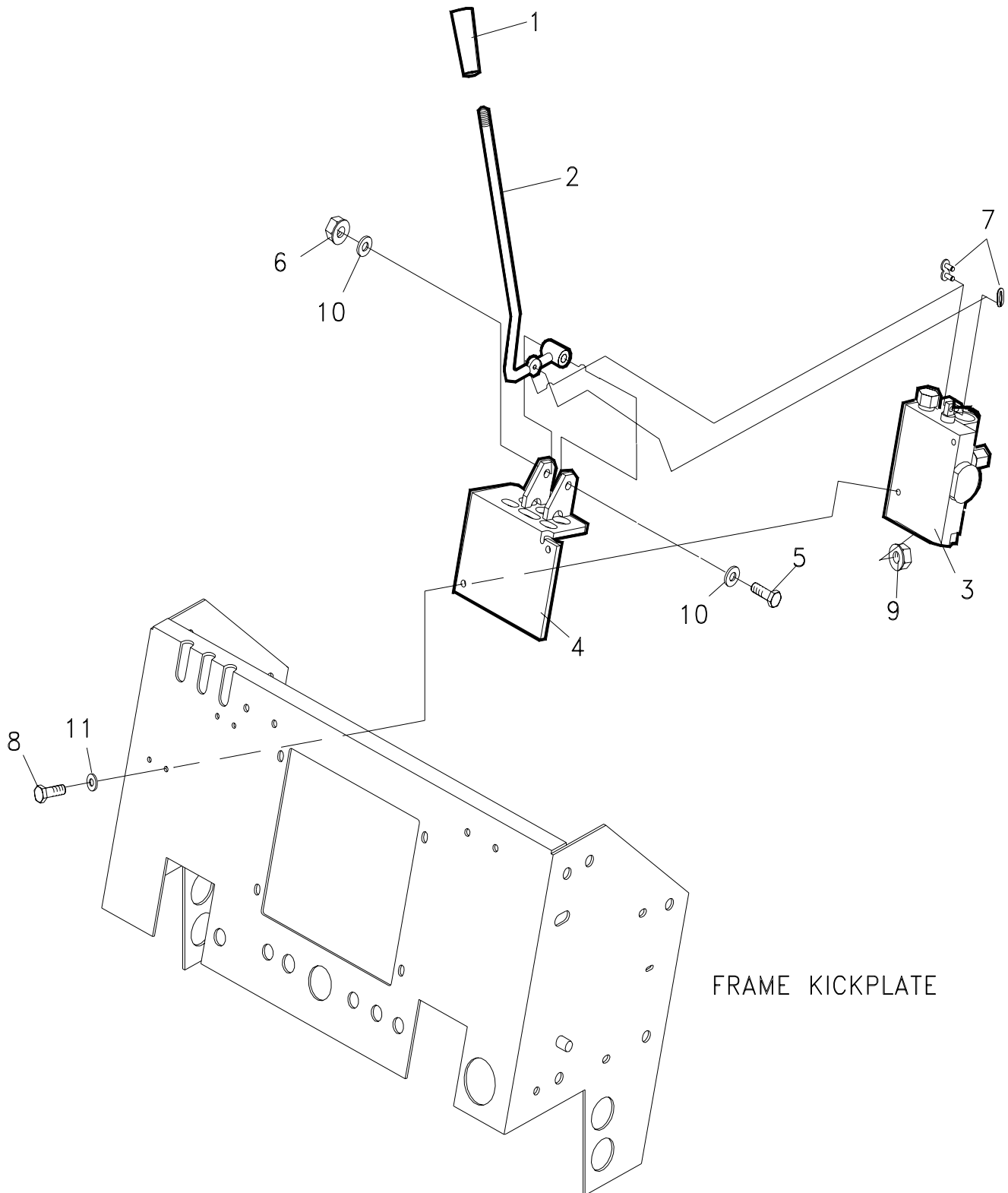


2217014


ITEM	RANSOMES PART NO	DESCRIPTION 	QTY
11-01	W038404-02	GRIP	
11-02	2216015	WELDMNT-LEVER	
11-03	W118047PB	BUSHING FLIP-LOK 1/2	
11-04	W43067A	COLLAR - SET.	
11-05	001290379	SCREW 1/4 UNC x 1/4	
11-06	64163-18	WASHER .33/64X 2 X 14GA	
11-07	64163-25	WASH.1-1/32X 2 X 11GA.	
11-08	001393256	NUT No.10-24	
11-09	W022372	B&S CABLE CLAMP	
11-10	001191098	SCREW No.10-24 x 3/4	
11-11	001393010	NUT 5/16 UNC	
11-11	001393222	NUT 5/16 UNC	
11-12	456110587	SCREW 5/16 UNC X 1.1/2 LONG	
11-13	461901679	DISC SPRING H083031	
11-14	172088	THROTTLE ARM.	
11-15	001599052	WASHER 33/64	
11-16	001599264	WASHER 25/64	
11-17	001393036	NUT 5/16 UNC	
11-18	148057-07	CABLE - THROTTLE	
11-19	128089-01	CONTROL CABLE	
11-20	64001-2	NUT-HEX JAM 3/8-24	
11-21	128079	ROD END	
11-22	64123-50	BLT-HEX 3/8-16 X 1	
11-23	64151-3	3/8-24 HH LOCK NUT	
11-24	172364A	ARM - CONTROL HEAD.	
11-25	001393010	NUT 5/16 UNC	
11-26	001393028	NUT 3/8 UNC	
11-27	W043035A	BUSHING	
11-28	W048060-01	SPRING	
11-29	172029	BRACKET - NEUTRAL RETURN	
11-30	699054798	SPACER.	
11-31	001190034	SCREW 5/16 UNC x 3/4	
11-32	450191	SCREW M8 x 20 HEX HD	
11-33	2216049	WELDMNT-NEUTRAL RETURN	
11-34	699054170	SPACER	
11-35	001090650	BOLT 3/8 UNF x 7	
11-36	452435	NUT M6 FLANGED NYLOC	
11-37	450000	BOLT M6 x 25 HEX HD	
11-38	699535007	BALL JOINT.	
11-39	456110587	SCREW 5/16 UNC X 1.1/2 LONG	

* Not Illustrated

**RANSOMES
FRONTLINE 933D**

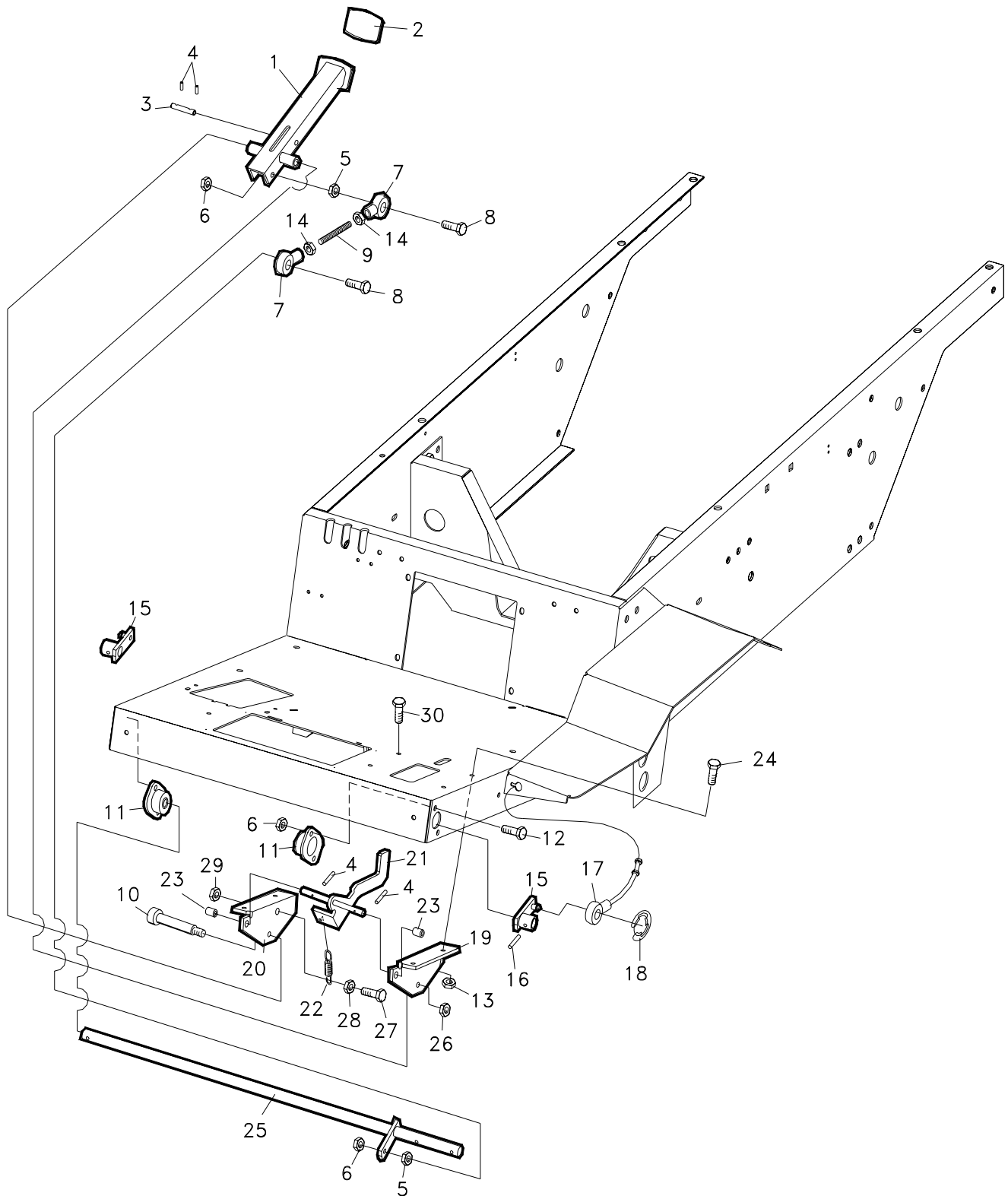


2217015a

ITEM	RANSOMES PART NO	DESCRIPTION 	QTY
12-01	2198109	KNOB	
12-02	2216005	WELDMNT-LIFT LEVER	
12-03	2208144	VALVE-LIFT	
12-04	2216003	LEVER SUPPORT WA	
12-05	001090016	BOLT 3/8 UNC x 2	
12-06	64151-2	HEX LOCK NUT	
12-07	W148062	MASTER LINK \50 CHAIN	
12-08	450003	BOLT 1/4 UNC X 2.1/4	
12-09	64229-01	LOCK NUT-NYLON 1/4-20	
12-10	001594050	WASHER	
12-11	699536778	WASHER	

* Not Illustrated

**RANSOMES
FRONTLINE 933D**

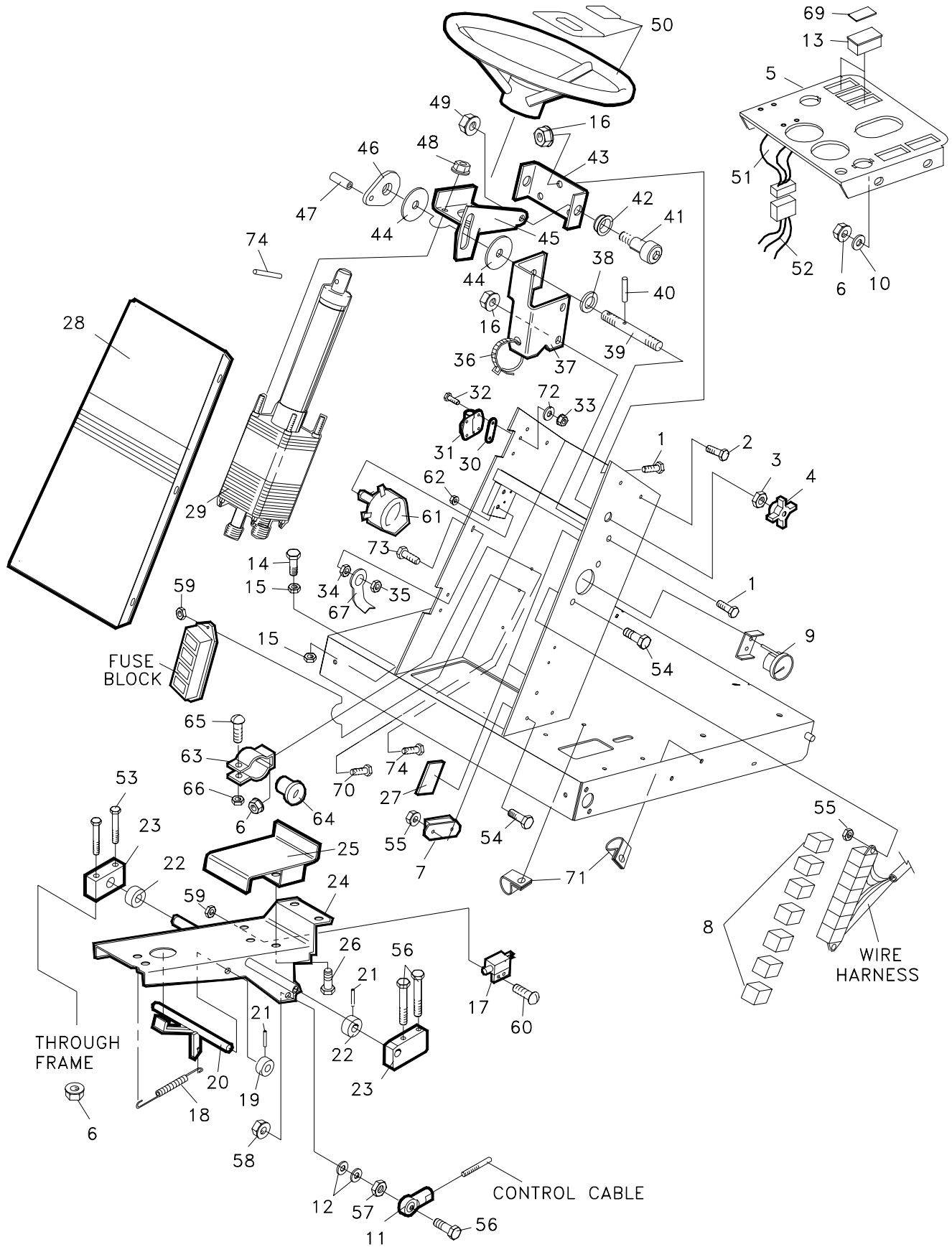


2217016

ITEM	RANSOMES PART NO	DESCRIPTION 	QTY
10-01	2216034	BRAKE PEDAL	
10-02	810152	COVER-FOOTPEDAL	
10-03	2213025	PIN LATCH	
10-04	64061-04	ROLL PIN	
10-05	64025-05	NUT-HEX 3/8-16	
10-06	A139322	NUT	
10-07	699535007	BALL JOINT.	
10-08	64123-70	BOLT-HEX	
10-09	64157-10	THREADED STUD	
10-10	64166-19	SHOULDER BOLT	
10-11	2188145	BEARING	
10-12	64123-15	BLT-HEX 3/8-16 X 3/4	
10-13	452436	NUT M8 FLANGED NYLOC	
10-14	64025-04	NUT-HEX 3/8-24	
10-15	2216035A	BRAKE SHAFT	
10-16	64061-02	ROLL PIN	
10-17	128025-07	CLUTCH CABLE	
10-18	001791197	SNAP RING 0.375	
10-19	2212085	BRACKET-BRAKE PIVOT	
10-20	2212086	BRACKET-BRAKE PIVOT	
10-21	2216024	WELDMNT-LEVER LOCK	
10-22	2218081	SPRING-EXTENSION	
10-23	118047-07	BUSHING	
10-24	450191	SCREW M8 x 20 HEX HD	
10-25	2216036	WLMNT-BRAKE SHAFT	
10-26	001393028	NUT 3/8 UNC	
10-27	450000	BOLT M6 x 25 HEX HD	
10-28	450323	NUT M6	
10-29	452435	NUT M6 FLANGED NYLOC	

* Not Illustrated

**RANSOMES
FRONTLINE 933D**



2217017a

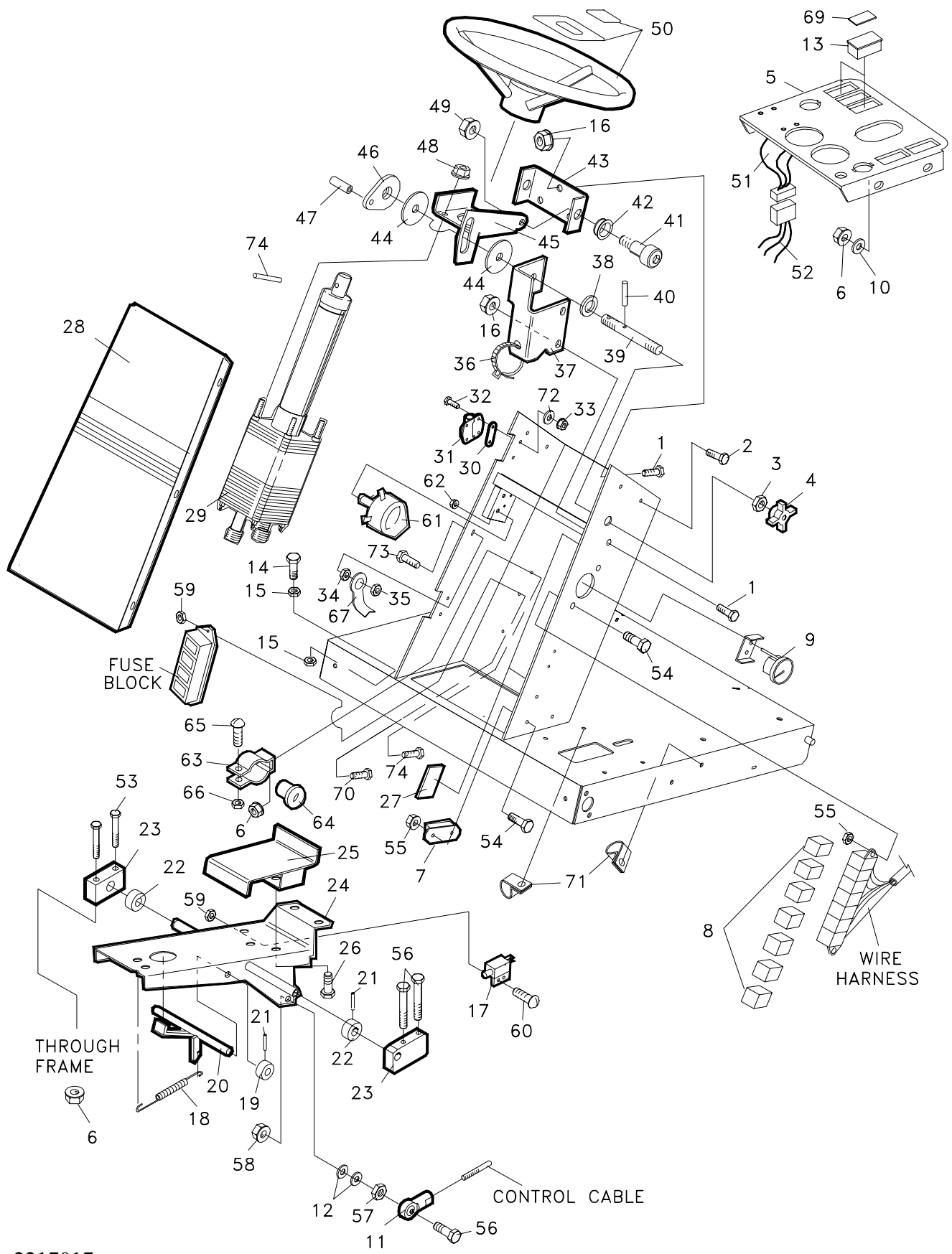
STEERING CONTROLS

LIST OF PARTS

ITEM	RANSOMES PART NO	DESCRIPTION 	QTY
13-01	450213	SCREW M10 x 20 HEX HD	
13-02	450171	SCREW M6 x 20 HEX HD	
13-03	GSF2072AE	NUT-HEX JAM 1/2-13	
13-04	W038124-01	KNOB	
13-06	452435	NUT M6 FLANGED NYLOC	
13-07	2218069	TIMER-INTERVAL	
13-08	W128037	RELAY	
13-09	008109402	HOURMETER	
13-10	450389	WASHER M6	
13-11	128079	ROD END	
13-12	450389	WASHER M6	
13-14	450020	BOLT M8 x 60 HEX HD	
13-15	450324	NUT M8	
13-16	452437	NUT M10 FLANGED NYLOC	
13-17	W038383	SWITCH	
13-18	009063080	SPRING EXTENSION	
13-19	699527145	COLLAR COMPLETE WITH SCREWS	
13-20	196021	WLDMT-NEUTRAL CONTROL	
13-21	001290379	SCREW 1/4 UNC x 1/4	
13-22	W43067A	COLLAR - SET.	
13-23	MBE3498	BLOCK ASSY	
13-24	2206086	FOOT PEDAL - W/ASSY.	
13-25	699531621	ADAPTOR	
13-26	001190377	SCREW 1/4 UNC x 1/2	
13-27	2208077	CATCH-MAGNETIC W/ADJ	
13-28	2202094	COVER-TOWER	
13-29	2208142	STEER GEAR	
13-30	2202108	SPACER-TOWER HINGE	
13-31	2208076	HINGE-TOWER COVER	
13-32	64152-50	SCREW-M5-.08 X 16 TOR	
13-33	450376	LOCKNUT-NYLON M5-0.8P	
13-34	450455	NUT M12 VERBUS RIPP	
13-35	452438	NUT M12 FLANGED NYLOC	
13-36	001992032	TIE 9 x 350	
13-37	172304	BRACKET - TILT WHEEL.	
13-38	001594080	WASHER 0.516	
13-39	173006	SHAFT - LOCKING.	
13-40	001419072	ROLL PIN 3/16 x 7/8	
13-41	64166-17	BLT-SHLDR 3/8-16 X 1.12	
13-42	W118047PB	BUSHING FLIP-LOK 1/2	
13-43	172042	STEERING BRACKET.	
13-44	009072090	FRICTION DISC	
13-45	172298	STEERING SUPPORT.	
13-46	176100	FRICTION PLATE - W/ASSY.	
13-47	001496248	PIN 5/16 x 1	

* Not Illustrated

**RANSOMES
FRONTLINE 933D**



2217017a

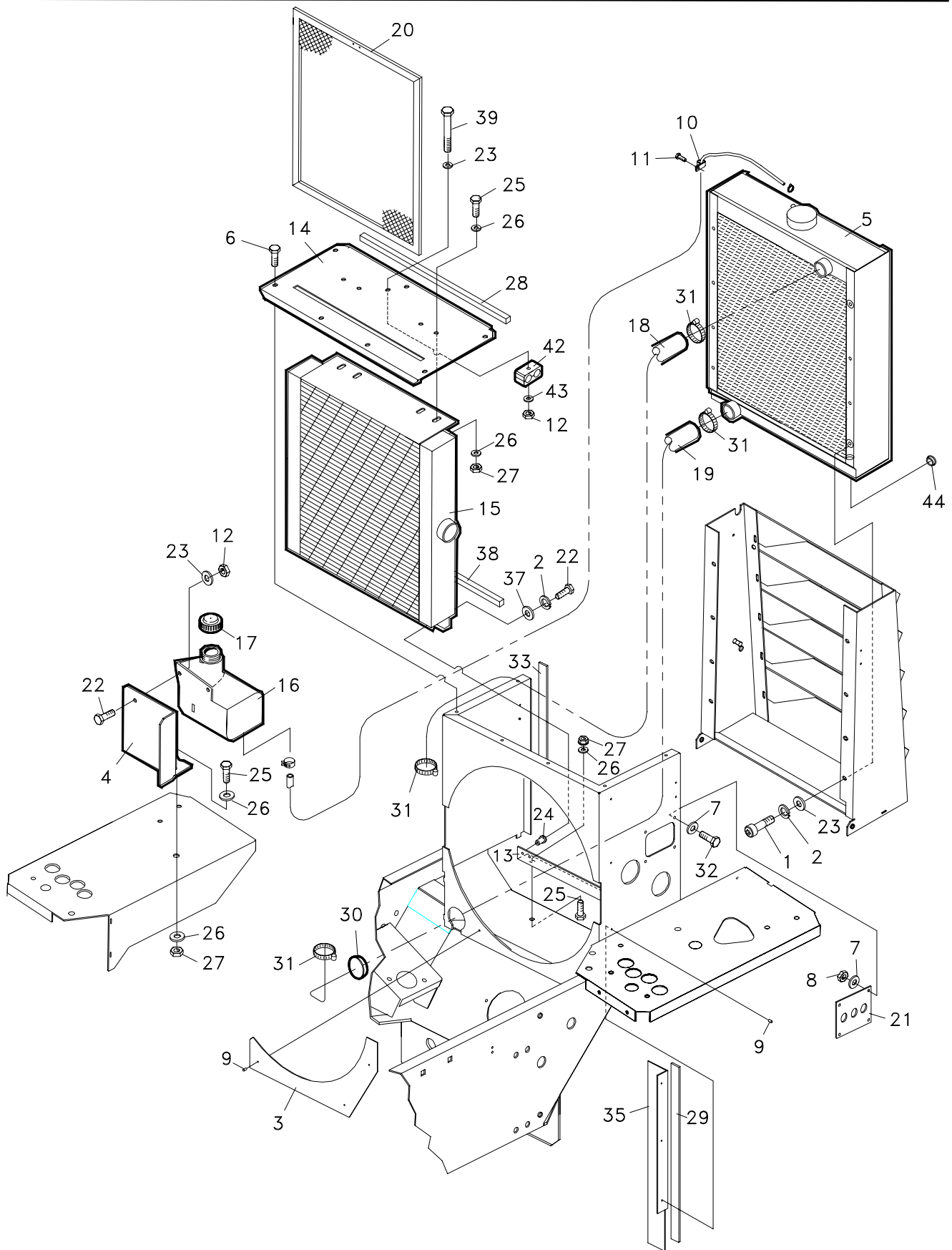
STEERING CONTROLS

LIST OF PARTS

ITEM	RANSOMES PART NO	DESCRIPTION 	QTY
13-48	001393117	NUT 5/16 UNF	
13-49	GSF2080AC	LOCK NUT	
13-50	2198130	STEERING WHEEL	
13-51	009056230	HARNES INST PANEL 933	
13-52	2218101	HARNES-MAIN	
13-53	450002	BOLT M6 x 35 HEX HD	
13-54	450135	SCREW M4 x 20 HEX HD	
13-55	64237-08	LOCKNUT-NYLON M4-0.7	
13-56	450002	BOLT M6 x 35 HEX HD	
13-57	450323	NUT M6	
13-58	452435	NUT M6 FLANGED NYLOC	
13-59	001393256	NUT No.10-24	
13-60	001190042	SCREW No.10 x 1/2	
13-61	0886425	HORN AY	
13-62	450453	NUT M8 VERBUS RIPP	
13-63	699521018	BRACKET	
13-64	699527226	FLASHER.	
13-65	64018-2	BLT CRG 1/4-20X3/4	
13-66	64229-01	LOCK NUT-NYLON 1/4-20	
13-67	2218094	STRAP-DECK SUPPORT	
13-68	W178150	DIODE	
13-70	001191098	SCREW No.10-24 x 3/4	
13-71	48228-1A	CLIP-CABLE	
13-72	450389	WASHER M6	
13-73	450241	SCREW M12 x 30 HEX HD	
13-74	64061-26	ROLL PIN	

* Not Illustrated

**RANSOMES
FRONTLINE 933D**

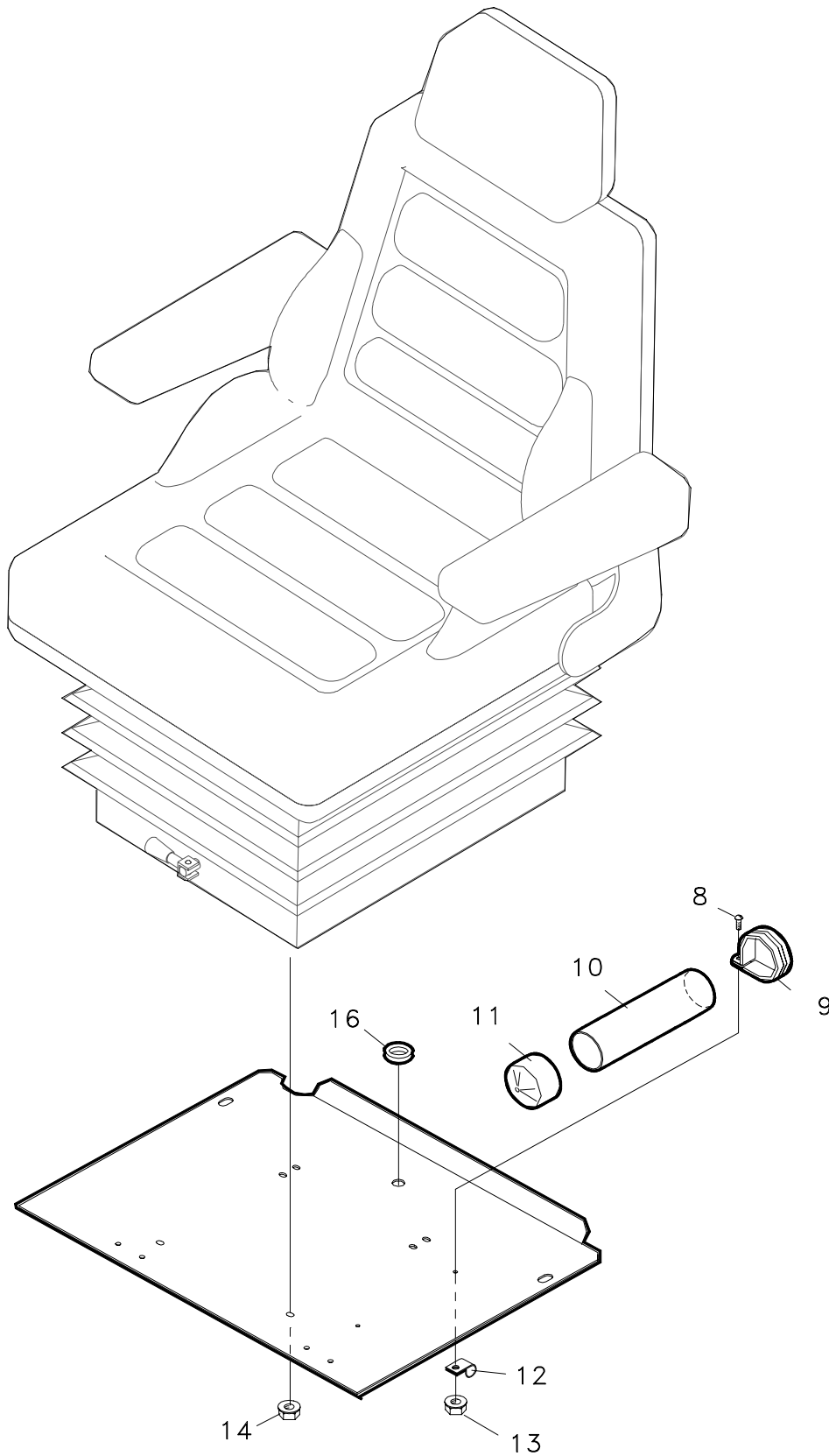


2217018


ITEM	RANSOMES PART NO	DESCRIPTION 	QTY
14-01	450190	SCREW M8 x 16 HEX HD	
14-02	64006-02	LOCKWSHR-HELICAL 5/16	
14-03	2212148	FAN-SHROUD PLATE	
14-04	2212091	BRACKET-COOLING BOTTLE	
14-05	2178211	RADIATOR	
14-06	452701	SCREW M8 x 16 HEX TAPTITE	
14-07	450389	WASHER M6	
14-08	452435	NUT M6 FLANGED NYLOC	
14-09	W64215-01	POP RIVET IFI NO.43	
14-10	469016517	'P' CLIP H980	
14-11	001191103	SCREW 1/4 UNC x 5/8	
14-12	452436	NUT M8 FLANGED NYLOC	
14-13	2212043	BRACKET-OIL COOLER	
14-14	2212044	SHROUD - TOP FAN	
14-15	2178212	OIL COOLER	
14-16	2218077	BOTTLE-COOLANT	
14-17	831905	CAP - OVERFLOW BOTTLE	
14-18	2218095	HOSE-RADIATOR	
14-19	2218096	HOSE-RADIATOR	
14-20	2218006	SCREEN-OIL COOLER	
14-21	2218086	SEAL-TUBE/FAN SHROUD	
14-22	450191	SCREW M8 x 20 HEX HD	
14-23	450390	WASHER M8	
14-24	450369	NUTSERT M8 A-L 1ST GRIP	
14-25	450213	SCREW M10 x 20 HEX HD	
14-26	450391	WASHER M10	
14-27	452437	NUT M10 FLANGED NYLOC	
14-28	48450-21	FOAM	
14-29	W38471	FOAM	
14-30	148034-05	GROMMET-INSULATION	
14-32	450170	SCREW M6 x 16 HEX HD	
14-33	W38471	FOAM	
14-34	48255-02	STREET ELBOW 90 DEG.	
14-35	2212118	BAFFLE-OIL COOLER LH	
14-36	2212119	BAFFLE OIL COOLER RH	
14-37	001599272	WASHER 21/64	
14-38	699534051	FOAM (BAF 8450 PG)	
14-39	450020	BOLT M8 x 60 HEX HD	
14-42	2208139	CLAMP - TUBE	
14-43	001599264	WASHER 25/64	
14-44	2690024-01	FITTING	

* Not Illustrated

**RANSOMES
FRONTLINE 933D**

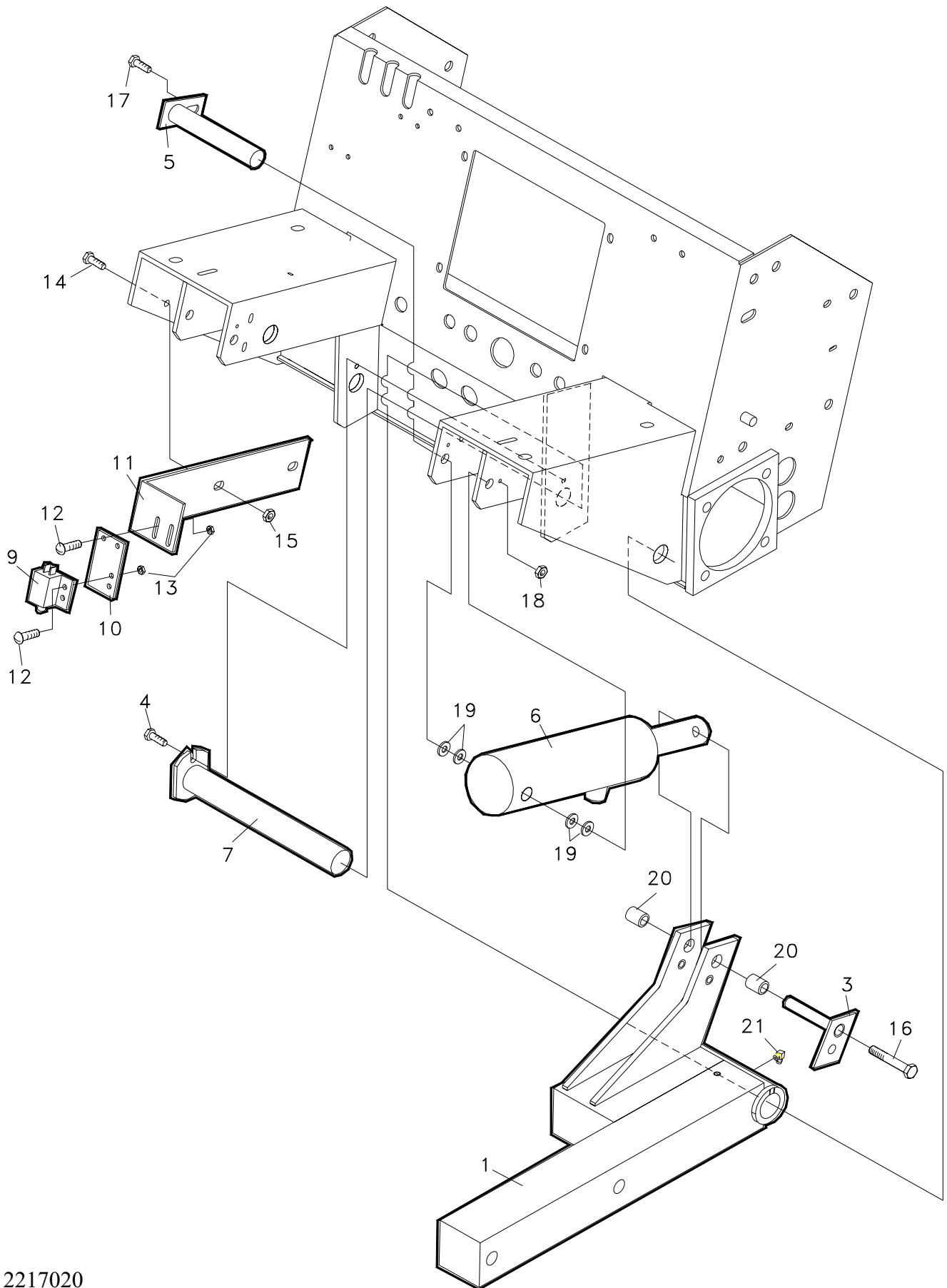


2217019

ITEM	RANSOMES PART NO	DESCRIPTION 	QTY
15-08	450171	SCREW M6 x 20 HEX HD	
15-09	38542	CLAMP-DOCUMENT TUBE	
15-1	A819940	SEAT	1
	450552	SCREW, M8 x 20, PAN HD	4
	450390	WASHER, M8	4
	450411	S.L.WASHER, M8	4
	450324	NUT, M8	4
15-10	38541	TUBE-DOCUMENT	
15-11	38061A	SPINDLE SHIELD	
15-12	469016517	'P' CLIP H980	
15-13	450453	NUT M8 VERBUS RIPP	
15-14	A139301	NUT 5/16 UNC	
15-16	148034-08	GROMMET	

* Not Illustrated


**RANSOMES
FRONTLINE 933D**




2217020

PUSH ARM ASSEMBLY

LIST OF PARTS

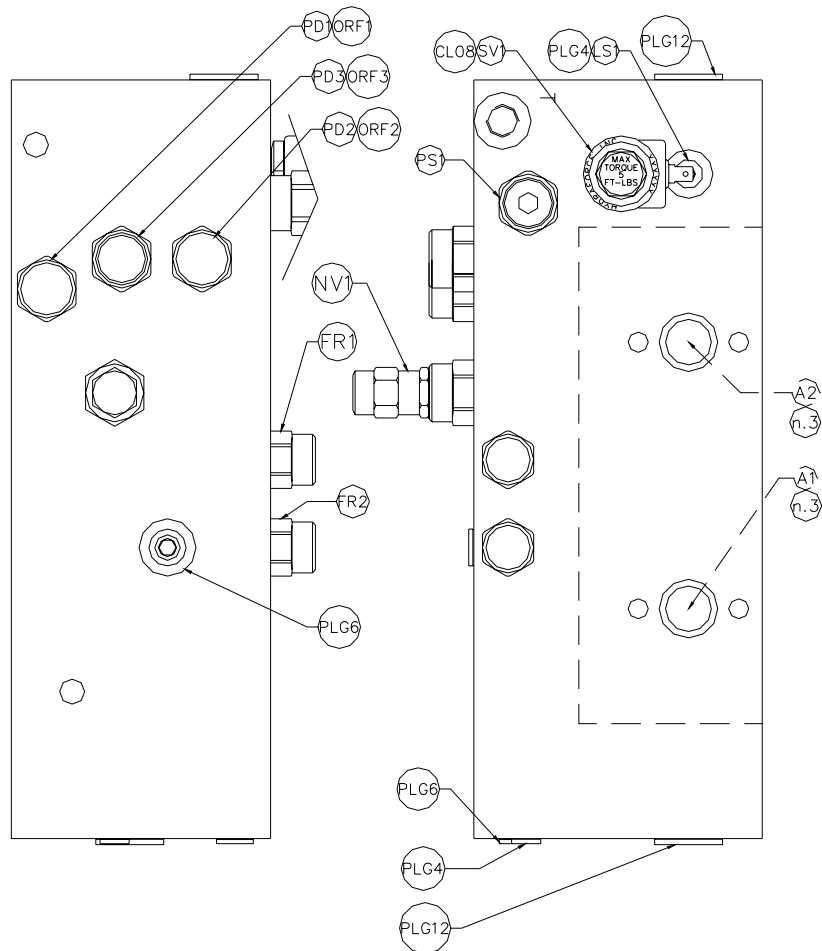
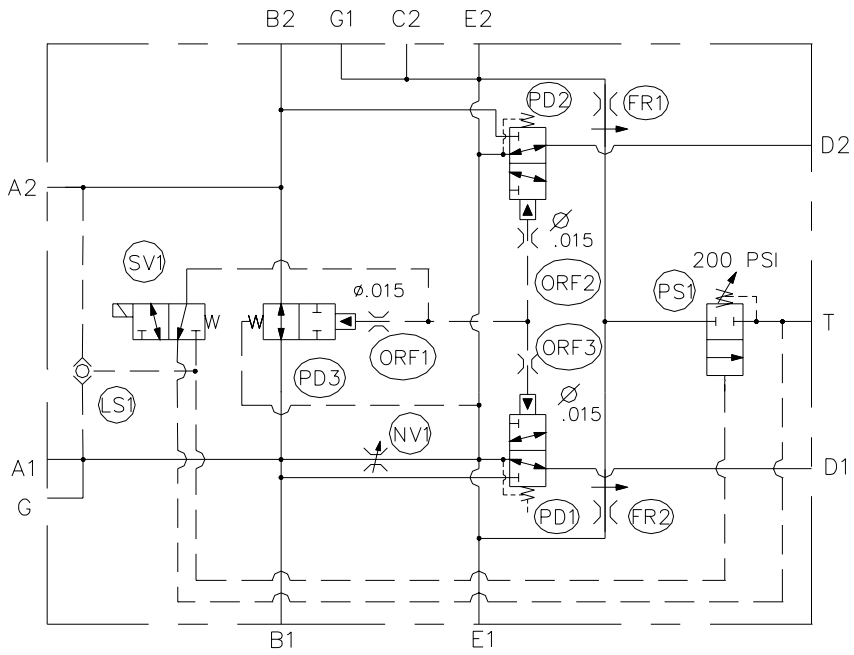
ITEM	RANSOMES PART NO	DESCRIPTION 	QTY
17-01	W146259	PUSH ARM LH	
17-02	W146260	PUSH ARM RH	
17-03	46019A	PIN WELDMNT-PUSH ROD	
17-04	450190	SCREW M8 x 16 HEX HD	
17-05	2216025	WLDMNT-CYL PIN ROD	
17-06	2218014	CYLINDER-LIFT	
17-07	146197	WLDMT - PUSH ARM PIN	
17-09	W038383	SWITCH	
17-10	W172359	PLATE	
17-11	2212109	BRACKET SWITCH MOUNT	
17-12	001190042	SCREW No.10 x 1/2	
17-13	001393256	NUT No.10-24	
17-14	450190	SCREW M8 x 16 HEX HD	
17-15	452436	NUT M8 FLANGED NYLOC	
17-16	001190644	SCREW 1/4 UNC x 5/16	
17-17	456110016	SCREW 1/4 UNC X 3/4 LONG	
17-18	64229-01	LOCK NUT-NYLON 1/4-20	
17-19	001594080	WASHER 0.516	
17-20	W138024-02	BRG-DX .500 I.D.	
17-21	35027N	ZERK FITTING	

* Not Illustrated


ITEM	RANSOMES PART NO	DESCRIPTION 	QTY
01	W00459	DECAL	
02	W00460	DECAL	
03	2000733	DECAL - 933D	
05	2000684	DECAL - 4 WHEEL DRIVE	
06	2000685	DECAL - STRIPE	
07	00512	DECAL	
08	2218087	MAT-PLATFORM	
09	W00465	DECAL	
10	2000647	LABEL-FORWARD/REVERSE	
11	W148317-01	MAT-FENDER EXT LH	
11	W148317-02	MAT-FENDER EXT RH	
12	2000669	LABEL - PARK BRAKE 250EC	
13	2000653	LABEL-HYDRAULIC FLUID	
14	7369	LABEL-RED/WHITE STR	
15	2000628	LABEL 9 RANSOMES DIECUT	
16	2000659	LABEL-FAN EEC	
17	2000650	LABEL-BATTERY EEC	
18	2000652	LABEL-DIESEL FUEL EEC	
20	2000654	LABEL-HYDRAULIC FILL	
19	2000641	LABEL-EXPLOSION FUEL EEC	
21	48013-06A	MAT NON SKID 2.75*2	
22	48436	MAT-NON SKID	
24	2000656	LABEL - LIFT EEC	
25	MBG2594	SERIAL PLATE EEC	
25	MBG2595	SERIAL PLATE TUV	
27	2000688	DECAL - TYRE PRESSURE	
28	2000646	LABEL-CE 95	
29	00386-017	PLATE-EEC SERIES	
30	00468	LABEL EEC NOISE 90	
31	W00308	DECAL	
32	2000655	LABEL-READ OPERATORS EEC	
33	2000644	LABEL-MAINTENANCE EEC	
34	48517	HOLE PLUG	

* Not Illustrated

**RANSOMES
FRONTLINE 933D**

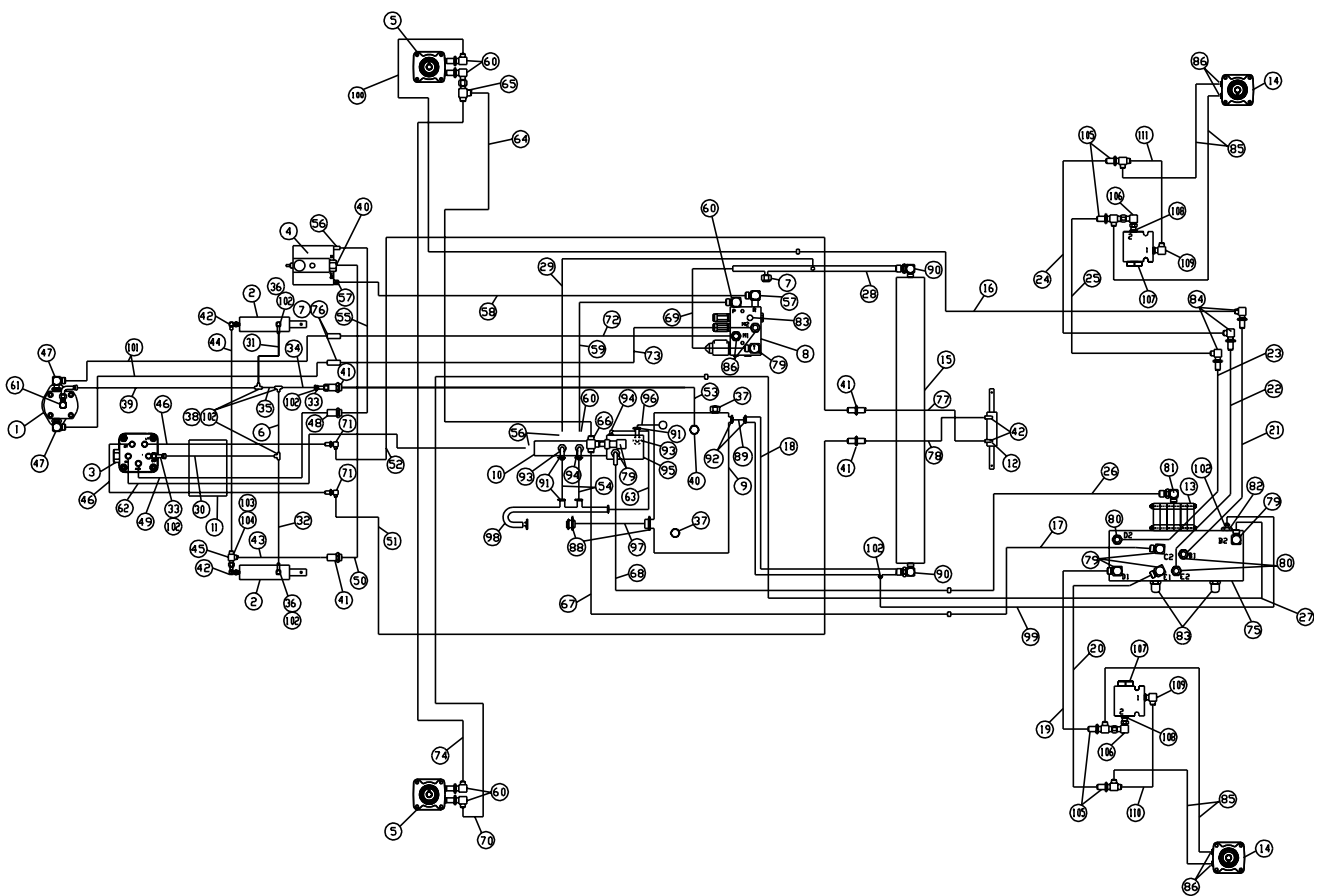


2217023a

ITEM	RANSOMES PART NO	DESCRIPTION 	QTY
	2218001	VALVE 4 WD	1
ORF1	178102-76	• ORIFICE DISC	1
ORF2	178102-76	• ORIFICE DISC	1
ORF3	178102-76	• ORIFICE DISC	1
PLG4	178102-60	• PORT PLUG	2
	178102-60	•• SEAL KIT	1
CL08	178102-21	• COIL ASSY.	1
LS1	178102-68	• LS04	1
	178102-69	•• SEAL KIT	1
PS1	178102-35	• PS08	1
	178102-48	•• SEAL KIT	1
NV1	178102-77	• NV10	1
	178102-08	•• SEAL KIT	1
FR1	178102-26	• FR08	1
	178102-04	•• SEAL KIT	1
FR2	178102-26	• FR08	1
	178102-04	•• SEAL KIT	1
PD3	178102-75	• PD10	1
	178102-54	•• SEAL KIT	1
PD1	178102-70	• PD10	1
	178102-54	•• SEAL KIT	1
PD2	178102-70	• PD10	1
	178102-54	•• SEAL KIT	1
SV1	178102-71	• SV08	1
	178102-72	•• SEAL KIT	1
PLG12	178102-73	• PORT PLUG	2
	178102-74	•• SEAL KIT	1
PLG6	178102-61	• PORT PLUG	2
	178102-63	•• SEAL KIT	1


* Not Illustrated

RANSOMES FRONTLINE 933D



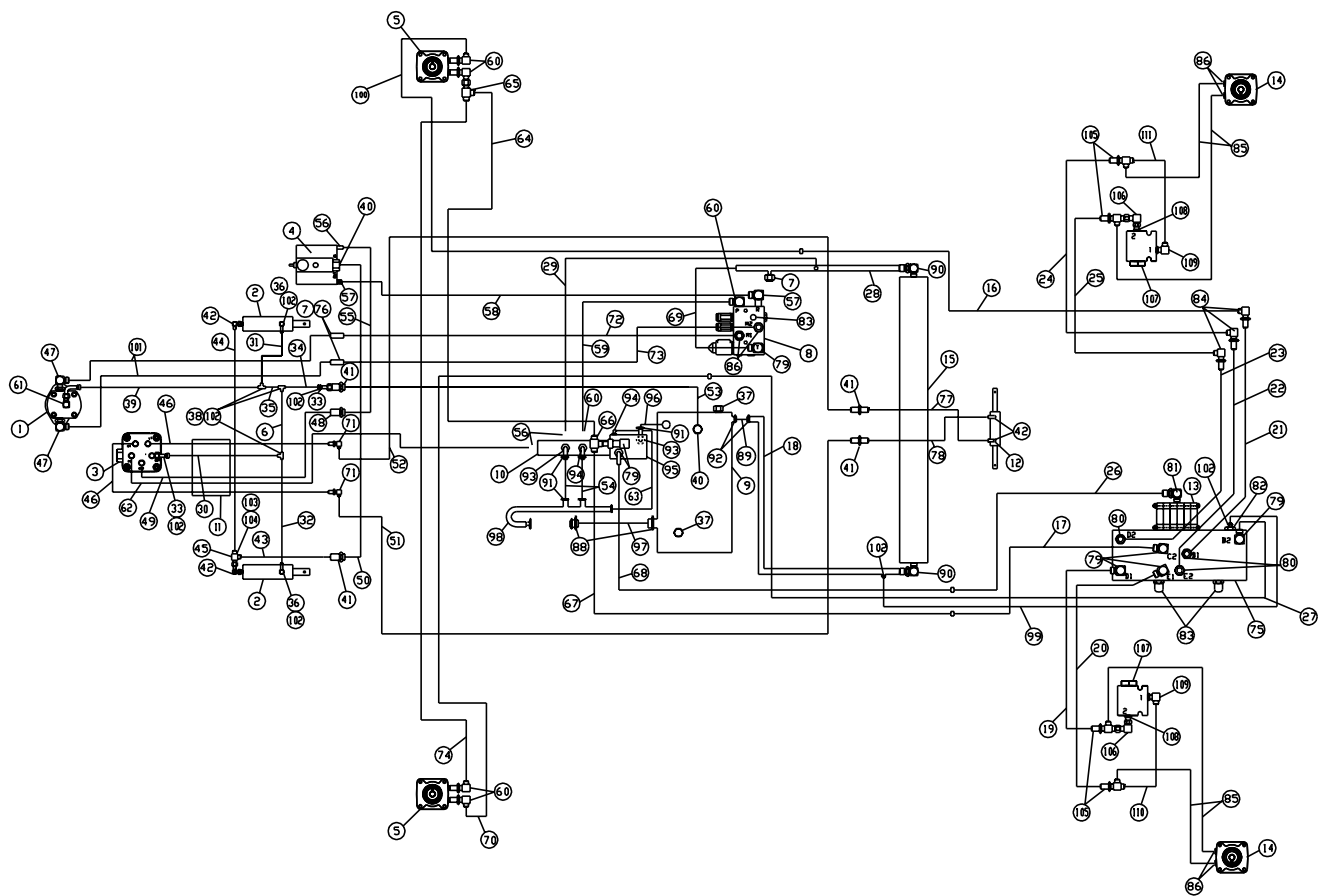
HYDRAULICS


LIST OF PARTS

ITEM	RANSOMES PART NO	DESCRIPTION 	QTY
1	2218003-03	HYDRAULIC MOTOR	1
2	2218014	HYDRAULIC CYLINDER - LIFT	2
3	2208142	POWER STEERING VALVE	1
4	148023	LIFT VALVE	1
5	148141-03	WHEEL MOTOR	2
6	69053	HOSE 3/8 HI TEMP BULK	1
7	178087-01	CAP NUT	3
8	178099	CUTTER DECK VALVE	1
9	2218011	OIL RESERVOIR	1
10	2178227	PUMP - 3 SECTION	1
11	108218-03	SLEEVE - HOSE 24"	1
12	148404	CYLINDER - POWER STEERING	1
13	2178213	FLOW DIVIDER	1
14	148141-02	WHEEL MOTOR	2
15	2178212	OIL COOLER	1
16	A799383	HOSE ASSY.5/8"BORE X 1755LG.	1
17	A799384	HOSE ASSY.5/8"BORE X 1310LG.	1
19	A799385	HOSE ASSY.5/8"BORE X 970LG.	1
20	A799386	HOSE ASSY.5/8"BORE X 1170LG.	1
21	2692239-05	HOSE 5/8 90 ORS/90 ORS	1
22	2692239-04	HOSE 5/8 90 ORS90/ORS	1
23	2692239-03	HOSE 5/8 90 ORS/90 ORS	1
24	A799387	HOSE ASSY.5/8"BORE X 915LG.	1
25	A799388	HOSE ASSY.5/8"BORE X 795LG.	1
26	A799389	HOSE ASSY.5/8"BORE X 1440LG.	1
27	A799390	HOSE ASSY.5/8"BORE X 2440LG.	1
29	2692219-04	HOSE 1/2 90 ORS/90 ORS	1
30	69053	HOSE 3/8 HI TEMP BULK	3
31	69053	HOSE 3/8 HI TEMP BULK	1
32	69053	HOSE 3/8 HI TEMP BULK	1
33	2690019-01	STEM-O-RING SWIVEL STR	2
34	69053	HOSE 3/8 HI TEMP BULK	1
35	69053	HOSE 3/8 HI TEMP BULK	1
36	W158058-04	FITTING	2
37	2690017-03	FITTING ORB PLUG	2
38	58026-01	CONNECTOR	3
39	69213-05	HOSE - 90 ORS	1
40	W158006-01	FITTING ORS/ORB	1
41	W158067-01	FITTING,BULKHEAD	4
42	W158007-01	FITTING	4
43	2692214-02	HOSE-3/8 ORS/ORS	1
44	2692214-09	HOSE 3/8 ORS/ORS	1
45	W158010-01	FITTING - ORS RUN TREE	1
46	2692214-01	HOSE-3/8 ORS/ORS	2
48	158067-04	FITTING-BLKHD ORS/ORS	1
49	2692214-12	HOSE 3/8/ORS/ORS	1
50	2692216-02	HOSE 3/8 90 ORS/45 ORS	1

* Not Illustrated

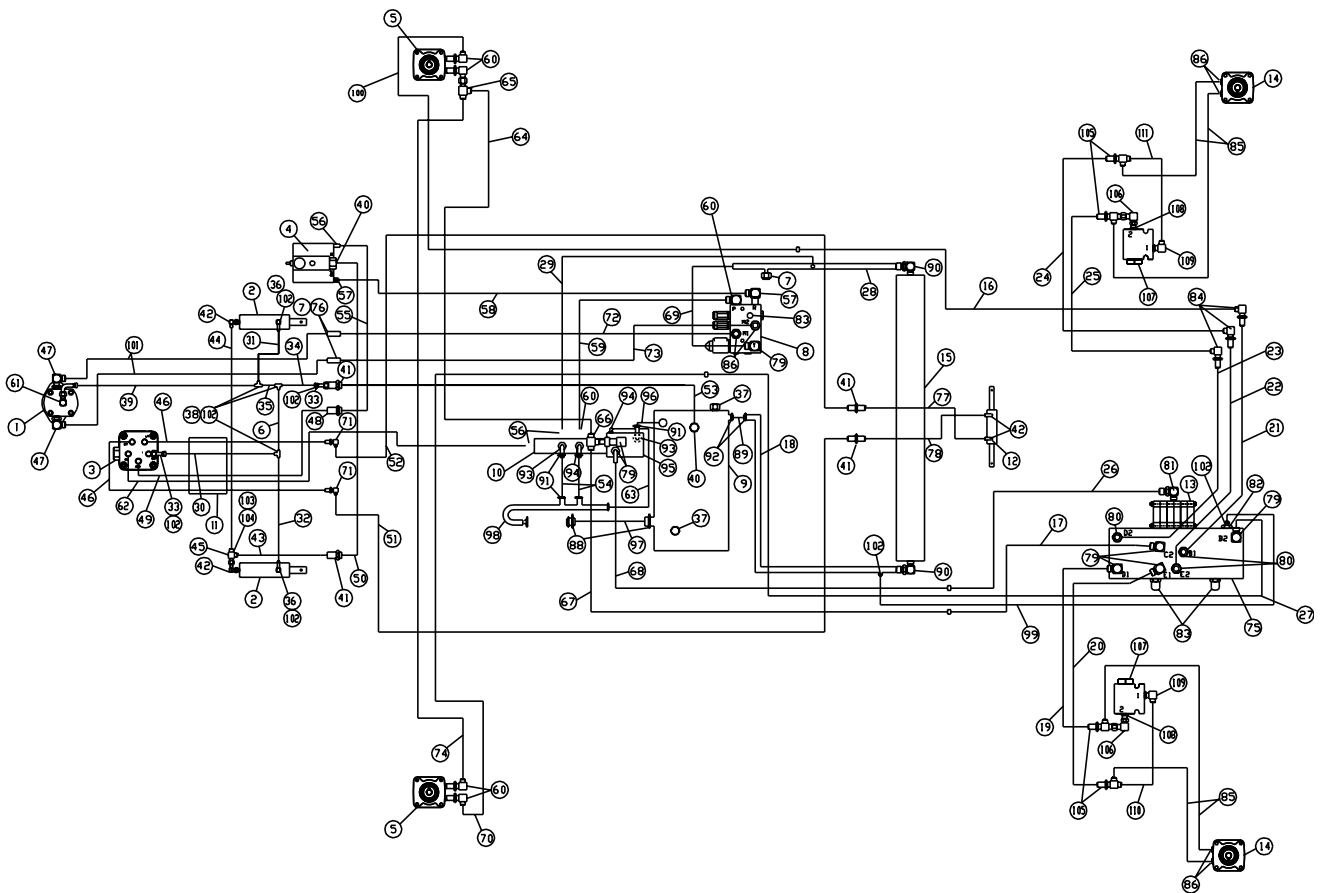
RANSOMES FRONTLINE 933D




ITEM	RANSOMES PART NO	DESCRIPTION 	QTY
51	2692217-09	HOSE 3/8 ORS/45 ORS	1
52	2692217-01	HOSE-3/8 ORS/45 ORS	1
53	2692215-11	HOSE 3/8 ORS/90 ORS	1
54	108092-13	HOSE 1"BORE X 16"LG.100R3	1
55	2692223-04	HOSE 1/2 ORS/90 ORS	1
56	W158006-05	FITTING	3
57	W158007-02	FITTING	2
58	2692223-05	HOSE 1/2 ORS/90 ORS	1
59	2692237-08	HOSE 5/8 ORS/45 ORS	1
60	W158007-05	FITTING	6
61	158007-09	FITTING	1
62	2692215-23	HOSE 3/8 ORS/90 ORS	1
63	108092-14	HOSE 1"BORE X 18"LG.100R3	1
64	2692240-04	HOSE 5/8 ORS/90 ORS	1
65	W158010-02	FITTING	1
66	69057-02	FITTING - ORS BRANCH TEE	1
67	2692226-04	HOSE 3/4 - STR 12 ORS/STR 12 ORS	1
68	2692236-03	HOSE 3/4 - 45° 12 ORS/STR 12 ORS	1
69	2692228-02	HOSE 3/4 90 ORS/90 ORS	1
70	178120-02	HOSE 5/8 - 45° 12 ORS/STR 10 ORS	1
71	W69055-01	FITTING	2
72	2692237-08	HOSE 5/8 ORS/45 ORS	1
73	2692237-07	HOSE 5/8 ORS/45 ORS	1
74	2692238-03	HOSE 5/8 ORS/ORS	1
75	2218001	VALVE 4WD	1
76	W158067-02	FITTING	2
77	2692217-11	HOSE 3/8 ORS/45 ORS	1
78	2692214-11	HOSE 3/8 ORS/ORS	1
79	W158007-07	FITTING	7
80	W158006-08	FITTING	3
81	W158007-08	FITTING	1
82	W69060-01	FITTING	1
83	W178079	TEST FITTING	3
84	W69055-03	FITTING	3
85	W178127-01	HOSE	4
86	W158006-07	FITTING	6
88	48383	CLAMP-HOSE 2-1/2 DIA.	4
89	69059	HOSE-BULK,1.25ID X 1.06FT	2
90	158007-12	FITTING 90 ORS/ORB	2
91	108094-01	HOSE CLAMP .75 TO 1.75	10
92	48396	CLAMP-HOSE 2"DIA	6
93	W158058-02	FITTING	2
94	W158058-03	FITTING	2
95	178037	PUMP M-35	1
96	2218065	HOSE - M35 RETURN	1
97	2218066	HOSE - FILTER INLET	1
98	2218107	MANIFOLD	1

* Not Illustrated

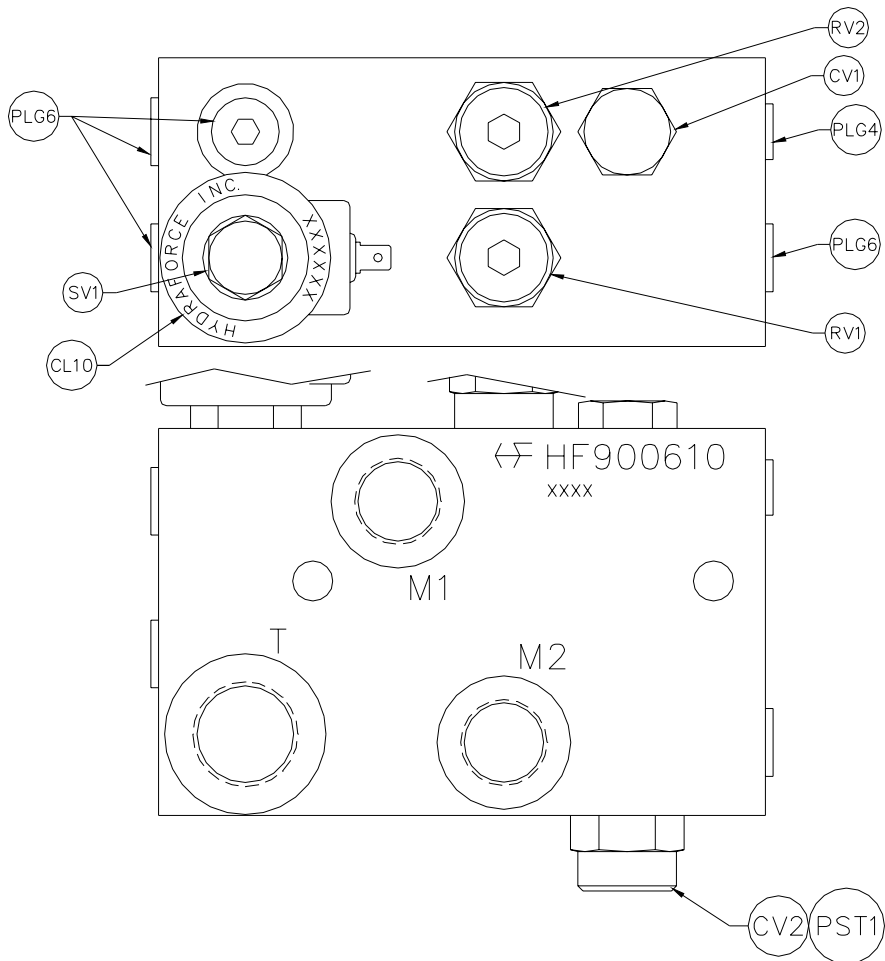
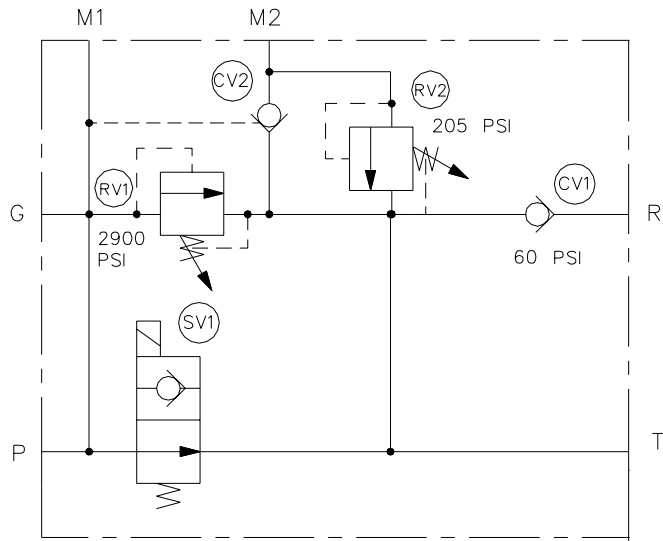
RANSOMES FRONTLINE 933D




ITEM	RANSOMES PART NO	DESCRIPTION 	QTY
99	69053	HOSE 3/8 HI TEMP BULK	2
102	48540-01	HOSE CLAMP WITTEK	15
103	W158061-04	O RING	1
104	W69068-05	ORIFICE	1
105	W69056-01	FITTING	4
106	2218126	TUBE	2
107	2218125	CHECK VALVE	2
108	158006-14	FITTING-ORB/ORS	2
109	158007-14	FITTING 90 ORS/ORB	2
110	2218127	TUBE - CHECK PORT 1 LH	1
111	2218128	TUBE - CHECK PORT 1 RH	1

* Not Illustrated

**RANSOMES
FRONTLINE 933D**

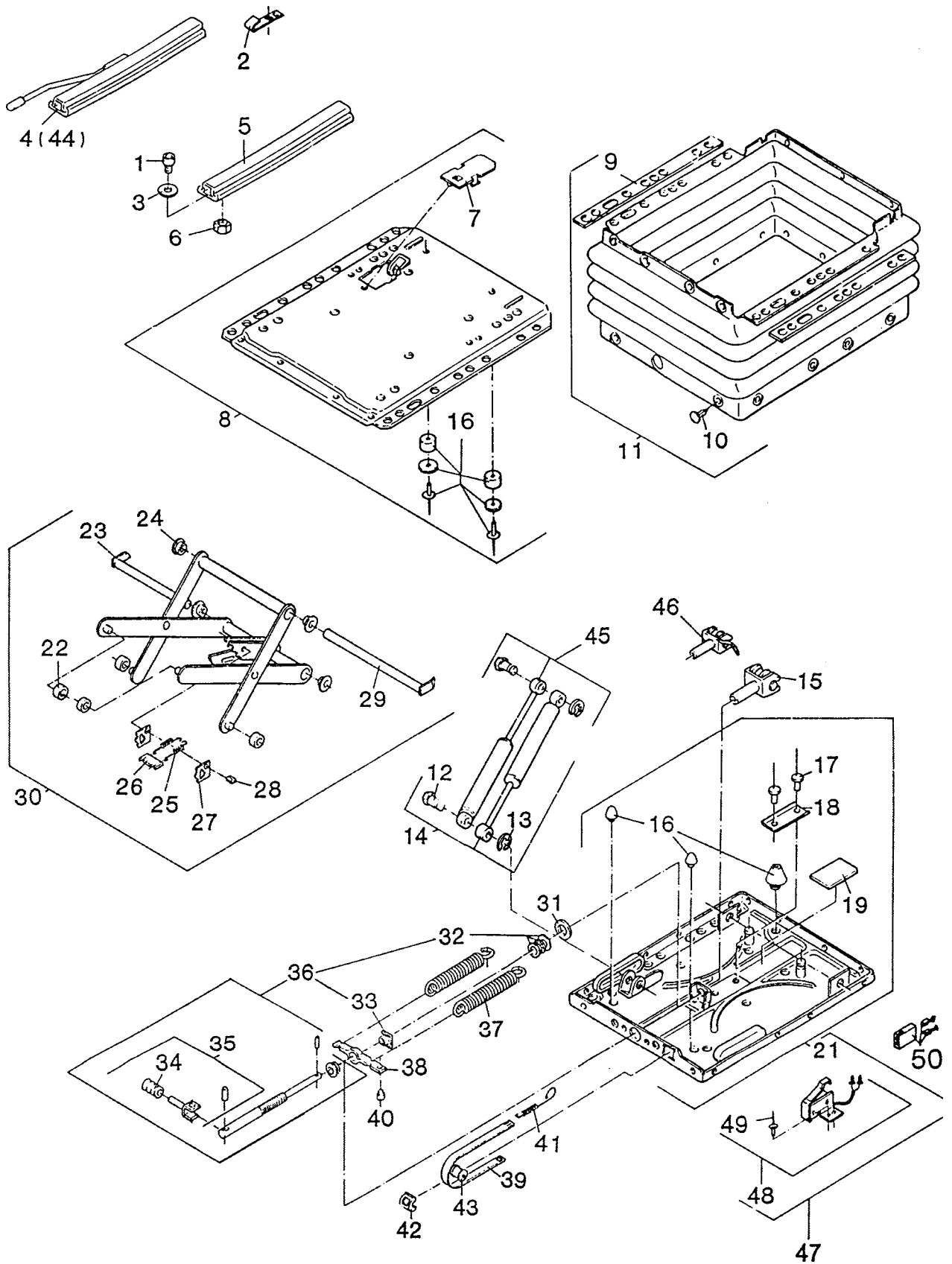


2217044

ITEM	RANSOMES PART NO	DESCRIPTION 	QTY
	W178099	VALVE	1
CV1	178102-58	• CV08	1
	178102-03	•• SEAL KIT	1
CV2	178102-59	• CV10	1
	178102-01	•• SEAL KIT	1
RV1	178102-12	• RV10	1
	178102-02	•• SEAL KIT	1
RV2	178102-34	• RV10	1
	178102-02	•• SEAL KIT	1
SV1	178102-16	• SV10	1
	178102-01	•• SEAL KIT	1
CL10	178102-17	• COIL	1
PST1	178102-57	• PILOT PISTON	1
PLG4	178102-19	• PLUG	1
	178102-09	•• SEAL KIT	1
PLG8	178102-18	• PLUG	4
	178102-10	•• SEAL KIT	1


* Not Illustrated

**RANSOMES
FRONTLINE 933D**



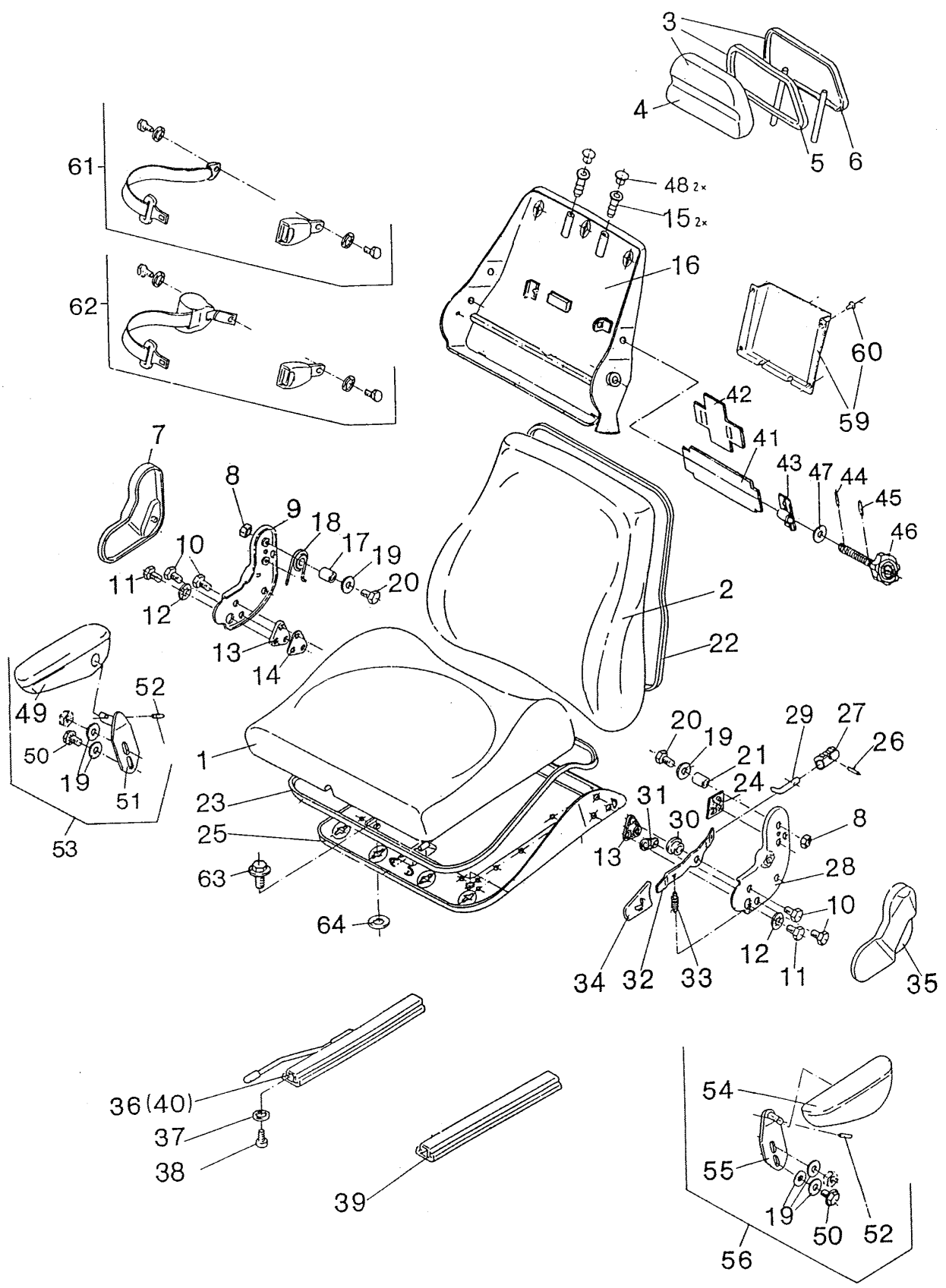
SEAT SUSPENSION BREAKDOWN

LIST OF PARTS

ITEM	RANSOMES PART NO	DESCRIPTION 	QTY
1	A819964	Screw	6
2		Stop	1
3		Washer	2
4		Slide with Lever	1
5		Slide	1
6		Nut	6
7		Cover	1
8		Base Assy.	1
9		Plate	2
10		Pin	21
11		Gaiter Assy.	1
12		Pin	2
13		E Clip	2
14	A819968	Damper Assy	1
16		Buffer Assy.	1
17		Rivet	2
18		Runner	1
19		Plate	1
20		Suspension Assy.	1
22		Roller	4
23		Pin	1
24		Bush	4
25		Spring	2
26		Plate	1
27		Plate	2
28		Bolt	1
29		Pin	1
30		Hinge	1
31		Washer	1
32		Bearing	1
33	Nut	1	
34	Handle	1	
35	Lever Assy.	1	
36	Weight Adjuster	1	
37	A819941	Spring	2
38		Spring hook	1
39		weight Indicator	1
40		Stop	1
41		Spring	1
42	Window	1	
43	Roller	1	
46	Fork	1	
47	Spring Frame	1	
48	A905448	Microswitch	1
49		Screw	2
50		Connector	1


* Not Illustrated

**RANSOMES
FRONTLINE 933D**



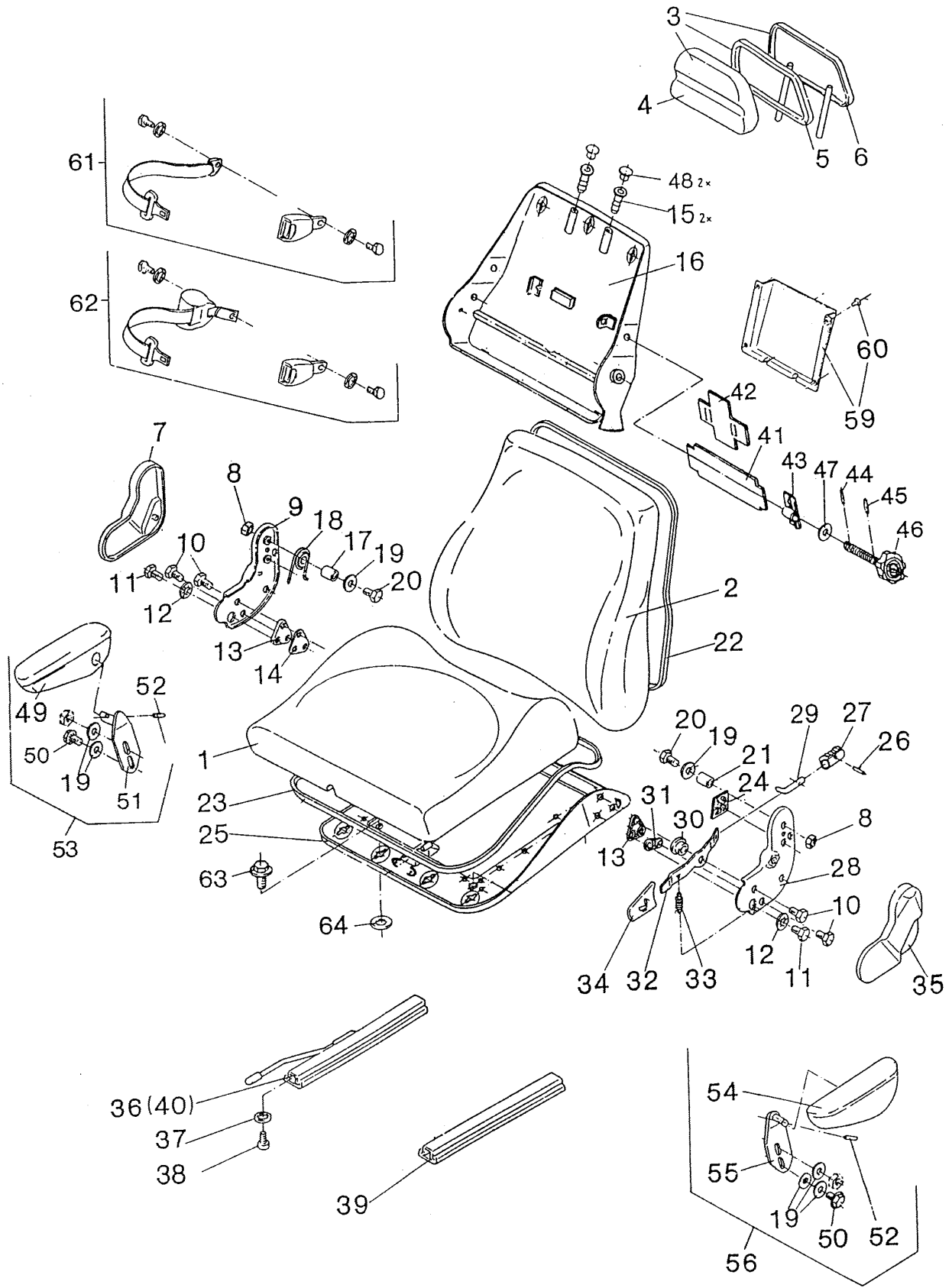
SEAT BREAKDOWN

LIST OF PARTS

ITEM	RANSOMES PART NO	DESCRIPTION 	QTY
1	A819935	Cushion (Red)	1
	A819945	Cushion (Grey)	
2	A819936	Back Rest (Red)	1
	A819946	Back Rest (Grey)	
3	A819956	Head Rest Assy.	1
4	A819937	HD Rest Cushion (Red)	1
	A819947	HD Rest Cushion (Grey)	
5		Edge Strip	1
6		Head Rest Frame	1
7	A819961	Cover RH	1
8		Nut	2
9		Mounting RH	1
10		Screw	4
11		Screw	2
12		SP Washer	2
13		Distance Plate	2
14		Distance Plate	1
15		Bush	2
16	A819969	Back Plate	1
17		Tube	1
18		Spring	1
19		Washer	2
20		Screw	2
21		Tube	1
22		Edge Strip	1
23		Edge Strip	1
24		Distance Piece	1
25		Seat Plate	1
26	A819965	Pin	1
27	A819966	Detent	1
28		Mounting IH	1
29	A819967	Rod	1
30		Bush	1
31		Distance Piece	1
32		Lever	1
33		Spring	1
34		Handle	1
35		Cover LH	1
36	A819964	Rail with Lever	1
37		Washer	4
38		Screw	4
39	A819975	Rail	1
41		Plate	1
42		Plate	1
43	A819970	Nut	1
44	A819971	Pin	1


* Not Illustrated

**RANSOMES
FRONTLINE 933D**



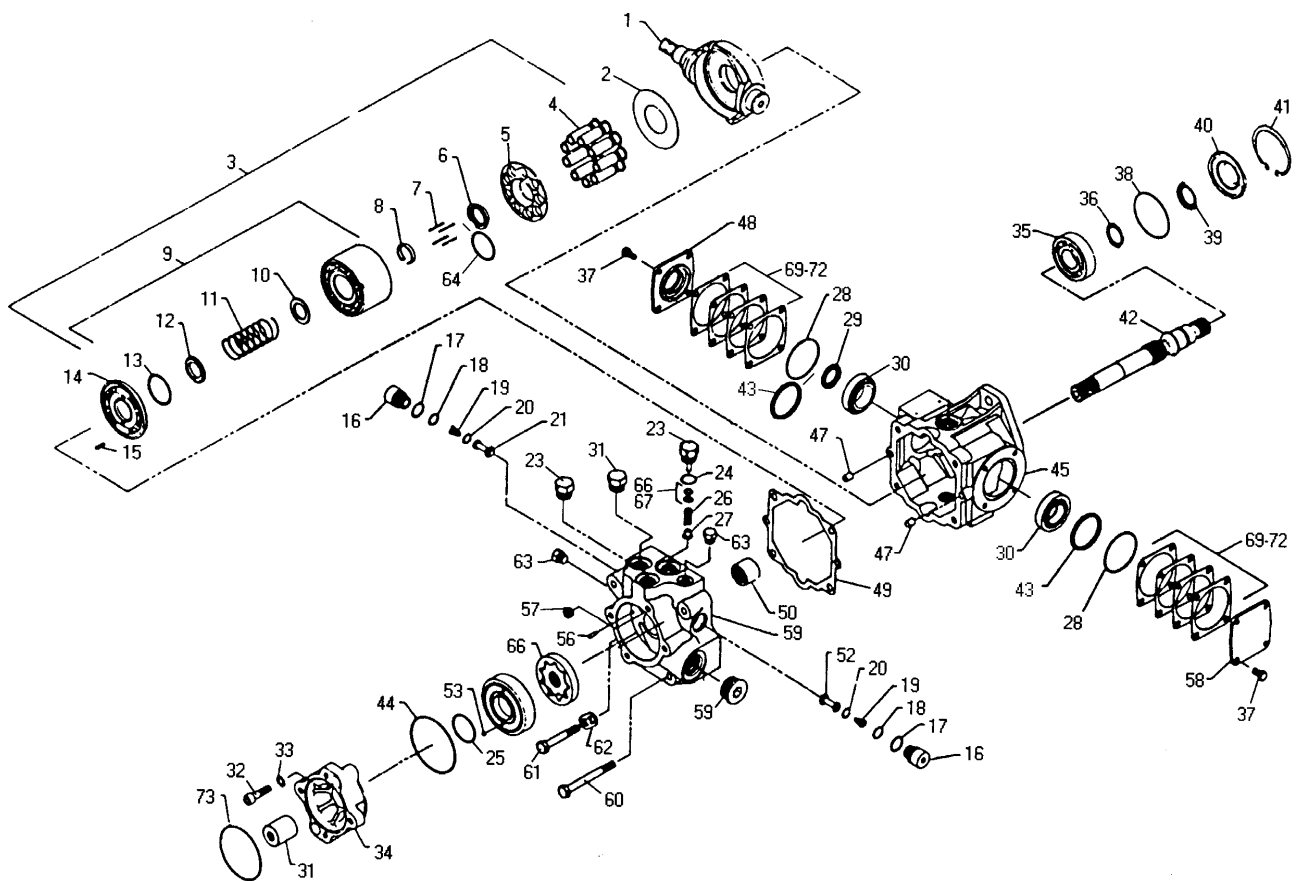
SEAT BREAKDOWN

LIST OF PARTS

ITEM	RANSOMES PART NO	DESCRIPTION 	QTY
45	A819972	Pin	1
46	A819973	Adjusting Spindle	1
47	A819974	Washer	1
48		Plug	2
49		Arm Rest RH	1
50		Screw	2
51		Support RH	1
52		Pin	2
53	A819985	Arm Rest Assy. RH	1
54		Arm Rest LH	1
55		Support LH	1
56	A819986	Arm Rest Assy.LH	1
57		Seat Assy	1


* Not Illustrated

RANSOMES FRONTLINE 933D



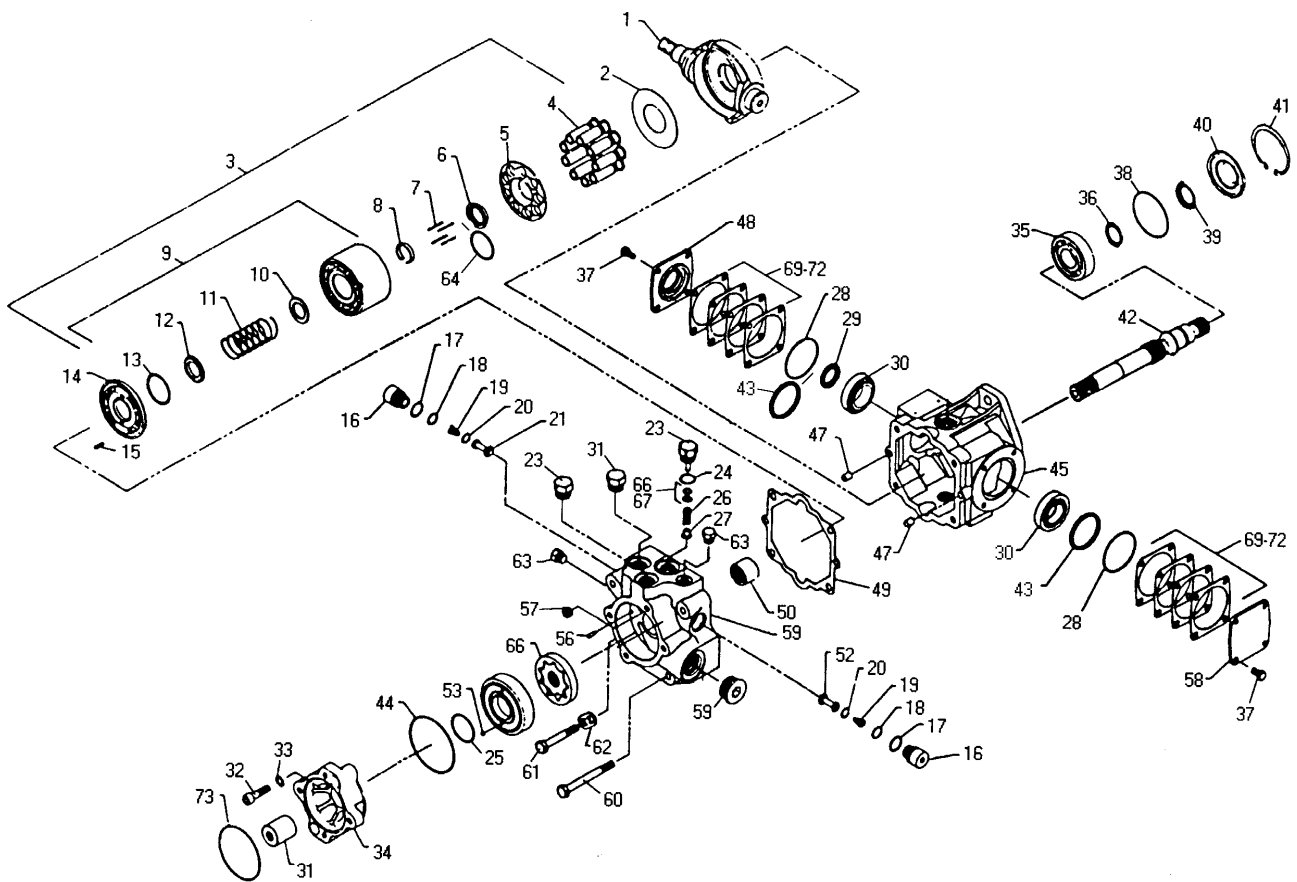
TRIPLE PUMP ASSEMBLY


LIST OF PARTS

ITEM	RANSOMES PART NO	DESCRIPTION 	QTY
19-1	178037-01	SAU/SUN 4350289	1
19-2	178037-02	SAU/SUN 4350148	1
19-3	178037-03	SAU/SUN 4350291	2
19-4	178037-04	SAU/SUN 4350253	1
19-5	178037-05	SAU/SUN 4350185	1
19-6	178037-06	SAU/SUN 430186	1
19-7	178037-07	SAU/SUN 9004875-0109	1
19-8	178037-08	SAU/SUN 4350048	1
19-9	178037-09	SAU/SUN 4350100	1
19-10	178037-10	SAU/SUN 4350012	1
19-11	178037-11	SAU/SUN 4350172	1
19-12	178037-12	SAU/SUN 4350061	1
19-13	178037-13	SAU/SUN 9006250-0162	1
19-14	178037-14	SAU/SUN 4350157	1
19-15	178037-15	SAU/SUN 9004700-1910	1
19-16	178037-16	SAU/SUN 4350182	1
19-17	178037-17	SAU/SUN 9004100-2110	1
19-18	178037-18	SAU/SUN 9004201-5000	1
19-19	178037-19	SAU/SUN 3103319	1
19-20	178037-20	SAU/SUN 4350183	2
19-21	178037-21	SAU/SUN 3103375-0210	1
19-22	178037-22	SAU/SUN 9005100-8700	1
19-23	178037-23	SAU/SUN 4800145	1
19-24	178037-24	SAU/SUN 9004201-6200	1
19-25	178037-25	SAU/SUN 9004100-2230	1
19-26	178037-26	SAU/SUN 4800176	1
19-27	178037-27	SAU/SUN 4800134	1
19-28	178037-28	SAU/SUN 9004300-1460	2
14-29	178037-29	SAU/SUN 9008000-0117	1
19-30	178037-30	SAU/SUN 9001415-0006	2
19-31	178037-31	SAU/SUN 4350189	1
19-32	178037-32	SAU/SUN 9007314-1009	2
19-33	178037-33	SAU/SUN 9009625-0154	2
19-34	178037-34	SAU/SUN 4800182	1
19-35	178037-35	SAU/SUN 9001315-0015	1
19-36	178037-36	SAU/SUN 9006325-01188	1
19-37	178037-37	SAU/SUN 9007210-0804	8
14-38	178037-38	SAU/SUN 9004100-1460	1
19-39	178037-39	SAU/SUN 9008000-0131	1
19-40	178037-40	SAU/SUN 4350190	1
19-41	178037-41	SAU/SUN 9006200-0300	1
19-42	178037-42	SAU/SUN 4350147	1
19-43	178037-43	SAU/SUN 4250043	2
19-44	178037-44	SAU/SUN 9004100-2360	1
19-45	178037-45	SAU/SUN 4350268	1
19-46	178037-46	SAU/SUN 9005110-9000	1


* Not Illustrated

**RANSOMES
FRONTLINE 933D**



ITEM	RANSOMES PART NO	DESCRIPTION 	QTY
19-47	178037-47	SAU/SUN 9004800-3708	2
19-48	178037-48	SAU/SUN 4250025	2
19-49	178037-49	SAU/SUN 4350145	1
19-50	178037-50	SAU/SUN 9001465-0015	1
19-51	178037-51	SAU/SUN 4350257	1
19-52	178037-52	SAU/SUN 3103375-0210	1
19-53	178037-53	SAU/SUN 9001210-1900	1
19-54	178037-54	SAU/SUN 4800179	1
19-55	178037-55	SAU/SUN 4800170	1
19-56	178037-56	SAU/SUN 9004800-1908	1
19-57	178037-57	SAU/SUN 9005001-2500	1
19-58	178037-58	SAU/SUN 4250027	2
19-59	178037-59	SAU/SUN 9005110-9200	1
19-60	178037-60	SAU/SUN 9007210-1018	2
19-61	178037-61	SAU/SUN 9007210-1012	2
19-62	178037-62	SAU/SUN 8800401	1
19-63	178037-63	SAU/SUN 9005100-5600	2
19-64	178037-64	SAU/SUN 4350187	14
19-66	178037-66	SAU/SUN 4800135-0010	A/R
19-67	178037-67	SAU/SUN 4800135-0020	A/R
19-68	178037-68	SAU/SUN 4800135-0050	A/R
19-69	178037-69	SAU/SUN 4250042-0030	A/R
19-70	178037-70	SAU/SUN 4250042-0050	A/R
19-71	178037-71	SAU/SUN 4250042-0100	A/R
19-72	178037-72	SAU/SUN 4250042-0200	A/R
19-73	158061-04	SAU/SUN 9004375-0024	1

* Not Illustrated

ITEM	RANSOMES PART NO	DESCRIPTION 	QTY
	2208144	VALVE LIFT	1

* Not Illustrated



Ransomes Way, Ipswich, England, IP3 9QG

RANSOMES

