

APPENDIX A:

UNITED STATES V. PARKER-HANNIFIN CORP.,

ET AL

CIVIL NO. 71-1011-LTL

JUDGMENT ENTERED: SEPT. 29, 1976

1 Raymond P. Hernacki
2 Antitrust Division
3 Department of Justice
4 1444 United States Court House
5 312 North Spring Street
6 Los Angeles, California 90012
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FILED

SEP 29 1976

CLERK, U. S. DISTRICT COURT
CENTRAL DISTRICT OF CALIFORNIA

BY

DEPUTY

Attorney for Plaintiff

8 UNITED STATES DISTRICT COURT
9 CENTRAL DISTRICT OF CALIFORNIA

FILED

11 UNITED STATES OF AMERICA,)
12)
13 Plaintiff,)
14)
15 v.)
16)
17 PARKER-HANNIFIN CORPORATION)
18 and PUROLATOR, INC.)
19)
20 Defendants.)

OCT 1 1976

CLERK, U.S. DISTRICT COURT
CENTRAL DISTRICT OF CALIFORNIA

Civil No. 71-1011-LTL

21 FINAL JUDGMENT

22 Plaintiff, United States of America, having filed its
23 complaint on April 27, 1971 and its amended complaint herein
24 on February 23, 1972, and all parties by their attorneys,
25 having severally consented to the making and entry of this
26 Final Judgment, without admission by any party in respect
27 to any issue and without this Final Judgment constituting
28 evidence or an admission by any party with respect to any
29 such issue;

30 NOW THEREFORE, before any testimony has been taken
31 herein, without trial or adjudication of any issue of fact
32 or law herein, and upon consent of the parties hereto, it
is hereby

ORDERED, ADJUDGED AND DECREED as follows:

I

This Court has jurisdiction of the subject matter hereof

1 and of the parties hereto. The complaint states claims
2 upon which relief may be granted against defendant Parker-
3 Hannifin Corporation under Section 7 of the Act of Congress
4 of October 15, 1914 (15 U.S.C. § 18), as amended, commonly
5 known as the Clayton Act.

6 II

7 A. This action is dismissed as to defendant Purolator,
8 Inc., with prejudice.

9 B. The Second Preliminary Injunction entered herein on
10 November 19, 1971 is dissolved.

11 III

12 As used in this Final Judgment:

13 1. "Parker" means the Parker-Hannifin Corporation.

14 2. "Schulz" means the Schulz Tool and Manufacturing
15 Company.

16 3. "Person" means any individual, partnership, firm,
17 corporation, association, or any other business or legal
18 entity.

19 4. "Prime Contractor" means a business entity such as
20 Lockheed Aircraft Corporation, McDonnell-Douglas Corporation,
21 LTV Aerospace Corp., or Grumman Aerospace Corp., which designs,
22 manufactures, and assembles high-speed jet aircraft.

23 5. "Armed Service" means a United States Armed Service,
24 such as the U.S. Navy, U.S. Air Force, or the U.S. Army, which
25 is a purchaser of a component or aircraft.

26 6. "Specified Fuel System Components" means those
27 components which are installed in an aircraft and are defined
28 as: valves associated with the direct operation of an
29 aircraft's fuel system so as to control the flow of the
30 fuel on its path to the engine(s) inlet connection(s); air
31 valves that are utilized to control the pressurization and/or
32 venting of the aircraft fuel system; and flow indicators

1 used to indicate movement of fuel in the aircraft fuel system
2 with the exception of engine fuel flow meters/indicators
3 and fuel quantity indicating systems. Such commonly used
4 fuel system components generally are characterized as
5 follows:

6 (a) fuel level shut-off valves used during
7 pressure and ground and/or in-flight refueling
8 and/or transfer;

9 (b) float operated devices (be they electric
10 switch or fluid control pilot type valves) utilized
11 to signal/control shut-off of the valves mentioned
12 in Item (a) above;

13 (c) integral fuel level control valves - any
14 combination of Items (a) and (b) in a common housing;

15 (d) in-flight refueling engagement devices--
16 MA-2 type probe nozzles, MA-2 type reception couplings
17 as used by the Navy, and retractable probe masts;
18 and Air Force in-flight refueling boom receptacles
19 (receiver);

20 (e) drain valves for water or fuel;

21 (f) pressure fueling/defueling adaptors,
22 caps and housings;

23 (g) open-closed type shut-off valves
24 (butterfly, slide, poppet, ball);

25 (h) float operated switches;

26 (i) fuel filters (74 micron and finer) and
27 fuel strainers (74 microns up to 50 mesh), supplied
28 and mounted for aircraft only, but not to include
29 filters with paper elements;

30 (j) wing pivot fittings (used only on F-111
31 and F-14 aircraft) - used as flexible telescoping
32 fuel lines;

1 (k) ejector pumps;

2 (l) self-sealing quick disconnects (only those
3 used with the drop tank installation);

4 (m) vent valves - to include sniffle type
5 valves;

6 (n) pressure and/or flow regulators - (1) fuel,
7 or (2) air as used for fuel tank pressurization;

8 (o) pressure relief valves - (1) fuel or (2)
9 air as used for fuel tank pressurization;

10 (p) check valves - for single direction flow
11 control (non-return valve);

12 (q) selector valves (3 or more ports);

13 (r) flow operated switches.

14 7. "Unique Machines and Special Tooling" shall mean
15 those machines and tools, and each of them listed on Schedule
16 C attached hereto.

17 8. "Divestiture Components" shall mean those fuel
18 system components listed on Schedule A attached hereto.

19 IV

20 The provisions of this Final Judgment shall apply to
21 the defendant, its successors, subsidiaries and assigns, and
22 to each of their respective officers, directors, agents, and
23 employees when acting in such capacity and to those persons
24 in active concert or participation with any of them who
25 receive actual notice of this Final Judgment by personal
26 service or otherwise.

27 V

28 A. Parker is ordered and directed to, within sixteen
29 (16) months from the date of entry of this Final Judgment,
30 enter into a contract or agreement, hereinafter referred to
31 as contract of divestiture, which will accomplish the
32 divestiture ordered by this Final Judgment. Parker is ordered

1 and directed to completely divest itself, within sixteen (16)
2 months from the date of contract of divestiture, of all of
3 its right, title, interest and obligations under all existing
4 contracts, orders, proposals, quotations, and future follow-on
5 contracts, for the manufacture and sale of the Divestiture
6 Components.

7 B. The contract of divestiture and the divestiture
8 ordered by this Final Judgment shall be made to a single
9 purchaser who shall demonstrate to the plaintiff that it
10 has the potential to design and manufacture the Divestiture
11 Components. Divestiture shall be accomplished so as to
12 not disrupt delivery schedules, and should be made so as to
13 minimize inconvenience to prime contractors.

14 C. Parker is ordered and directed to cooperate to the
15 best of its ability with the purchaser to promptly accomplish
16 the divestiture ordered by this Final Judgment, and to make
17 available to such purchaser, at such purchaser's option, until
18 the divestiture ordered herein is completed, and as a part of
19 the divestiture purchase price:

20 1. Parker's existing engineering and manu-
21 facturing information, including, but not limited
22 to, blue prints, drawings, specifications, plans,
23 manufacturing route sheets, tooling information
24 which Parker owns or controls at the time it enters
25 into the contract of divestiture and which are
26 used in the manufacture or production of the
27 Divestiture Components;

28 2. All machinery and tooling which Parker
29 acquired in its acquisition of Schulz which Parker
30 presently owns and which may be used in the
31 manufacture or production of Divestiture Compo-
32 nents;

1 3. All unique machines and special tooling
2 which Parker presently owns and which is used
3 in the manufacture or production of the Divestiture
4 Components;

5 4. Unrestricted, non-exclusive, royalty-
6 free licenses under the patents listed on
7 Schedule B hereto, and under all other Parker
8 patents and patent applications used on or
9 before the date of divestiture in the manu-
10 facture or production of the Divestiture
11 Components;

12 5. Engineers and other technically
13 qualified employees who shall be sent to the
14 purchaser's plant to assist in designing
15 plant and lay out, in setting up production
16 facilities, and in solving such production
17 problems as may arise. Purchaser will reim-
18 burse Parker for such assistance at Parker's
19 established bid rates for such class of
20 service, plus travel expenses;

21 6. Any information used by Parker in
22 purchasing raw materials and parts needed in
23 the production of Divestiture Components.
24 At purchaser's option, Parker will use its
25 best efforts to aid purchaser in obtaining
26 said raw materials and parts, including
27 consenting to the assumption by purchaser of
28 Parker's purchasing rights and obligations
29 under any purchase orders for said raw
30 materials and parts;

31 7. The opportunity to discuss employment
32 with any former Schulz employee presently

1 employed by Parker.

2 D. Parker is ordered and directed to allow employees
3 of the purchaser to have access to Parker's plant, upon
4 notice to Parker, during regular business hours on a
5 reasonable number of occasions in order to inspect and
6 observe Parker's production of the Divestiture Components.

7 E. Parker is ordered and directed to reimburse
8 each prime contractor and Armed Service for additional costs
9 resulting from the divestiture ordered by this Final Judgment,
10 not to exceed \$500 to the Armed Service and \$1,250 to the
11 prime contractor per each end item so divested, said claims
12 to be made in writing within a reasonable time after all such
13 costs are incurred but within six months following the
14 completion of the divestiture herein.

15 VI

16 If the divestiture ordered by this Final Judgment has not
17 been completed within sixteen (16) months from the date of
18 contract of divestiture, twelve and one-half percent (12-1/2%)
19 of the monies received by Parker from the delivery of any of
20 the Divestiture Components after the expiration of the said
21 thirty-two (32) month period, shall be placed in escrow
22 and shall become the property of the purchaser unless Parker
23 can demonstrate to the Court that the failure to accomplish
24 divestiture is due to events beyond Parker's control.

25 VII

26 Parker will eliminate any exclusive feature of its
27 patent license agreement with Fairchild Republic Division of
28 Fairchild Industries, Inc. ("Republic") under U.S. Letters
29 Patent 2,983,688, relating to the Retractable Receptacle for
30 Flight Refueling, and at the purchaser's option, will grant
31 to the purchaser, a sublicense under such patent license on
32 terms no less favorable than Parker has under its license

1 from Republic.

2 VIII

3 The purchaser shall submit to the jurisdiction of this
4 Court, and shall agree to engage in the production of Divesti-
5 ture Components for a reasonable period of time.

6 IX

7 A. Parker shall promptly make known the divestiture
8 ordered by this Final Judgment by the ordinary and usual
9 means and shall furnish to all bona fide prospective
10 purchasers, upon written request, on an equal and non-
11 discriminatory basis, the following information with respect
12 to the Divestiture Components: (1) an inventory of
13 available machinery, equipment and tooling acquired from
14 Schulz, not previously sold by Parker with Court approval;
15 (2) a total ship set price for the F-14 bill of material and
16 one total ship set price for the aggregate of all the
17 Divestiture Components; (3) an approximate total sales figure
18 for the aggregate of all the Divestiture Components for the
19 fiscal year ending June 30, 1974; (4) approximate information
20 concerning the number of the Divestiture Components Parker
21 produced from January 1, 1970 to the date of entry of this
22 Final Judgment and Parker's current delivery rate and its
23 present backlog and existing options for possible production;
24 (5) all outline drawings of the Divestiture Components.

25 Parker shall not be required to submit any information or
26 materials described above to anyone unless the recipient
27 thereof executes an affidavit requiring recipient to keep
28 such information and/or materials confidential, not to
29 reproduce it, and to return same to Parker.

30 B. The divestiture ordered by this Final Judgment shall
31 be first approved by the plaintiff, or failing such approval,
32 the approval of the Court, after reasonable notification to

1 the approval of the Court, after reasonable notification to
2 the plaintiff that defendant intends to seek Court approval.

3 C. Parker shall submit written reports to the plaintiff
4 every three (3) months following the entry of the Final
5 Judgment describing the efforts made by Parker to accomplish
6 the divestiture ordered by such Final Judgment.

7 D. At least sixty (60) days in advance of the anticipated
8 closing date of any contract of divestiture pursuant to this
9 Final Judgment, Parker shall supply plaintiff with the name
10 of the proposed purchaser, and all pertinent information
11 respecting the proposed divestiture, together with any
12 additional information plaintiff may request. Plaintiff will
13 advise Parker in writing, within 30 days after Parker has
14 supplied all the requested information, of plaintiff's
15 objections, if any, to the proposed divestiture.

16 E. The divestiture ordered by this Final Judgment shall
17 be made in good faith and shall be absolute and unqualified,
18 and Parker shall not take any action which will impair or
19 impede Parker's ability to accomplish such divestiture.

20 F. Nothing herein contained shall be deemed to prohibit
21 Parker from retaining, accepting and enforcing a bona fide
22 lien, mortgage, pledge, deed of trust, or any other form of
23 security reasonably necessary to secure full payment of the
24 price at which the divested property is sold or otherwise
25 disposed of, provided that if Parker shall reacquire or regain
26 ownership of or control over the property divested as a result
27 of any lien, mortgage, deed of trust, or otherwise, Parker
28 shall be required to terminate such ownership or control
29 within eighteen (18) months thereafter. Parker's disposition
30 of such regained property shall be made only to a person or
31 persons first approved by the plaintiff, or by the Court upon
32 a proper showing by the defendant, and after at least sixty

1 (60) days notice to the plaintiff of Parker's intention to
2 make such disposition, and setting forth in that Notice the
3 same type of information required by the Final Judgment with
4 respect to the initial divestiture ordered herein.

5 X

6 A. If Parker has not notified the plaintiff within four-
7 teen (14) months following the date of entry of this Final
8 Judgment that it has entered into a contract of divestiture,
9 each party shall notify the other in writing of the names and
10 descriptions of three persons it wishes to nominate as a
11 possible trustee. The parties shall seek to agree upon one
12 of the nominees to serve as a trustee for the divestiture
13 ordered by this Final Judgment, and if the parties are unable
14 to agree, the Court may select a trustee from said nominees.

15 B. If Parker has not entered into a contract of
16 divestiture by the end of the sixteen (16) month period
17 immediately following the date of the entry of this Final
18 Judgment the Court shall appoint a trustee upon application
19 by the plaintiff and with notice to Parker of such applica-
20 tion. Said trustee's main endeavor shall be to obtain prompt
21 divestiture in accordance with the provisions of this Final
22 Judgment to a qualified purchaser. The trustee shall furnish
23 a written report to plaintiff and defendant every thirty (30)
24 days after appointment, describing the efforts made to
25 accomplish said divestiture. The trustee shall have the
26 power to accomplish divestiture and shall perform at the
27 expense of Parker under a schedule of Court approved fees
28 and costs to be fixed at the time of said trustee's appoint-
29 ment.

30 C. The trustee, as soon as possible, but not less than
31 sixty (60) days in advance of any proposed divestiture, shall
32 notify the plaintiff and the defendant of the terms and

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1 conditions of the proposed divestiture, and they shall have
2 thirty (30) days thereafter to file with this Court any
3 objections either of them may have to the proposed divesti-
4 ture, and the Court shall hear all parties with respect
5 thereto, including said trustee.

6 D. Until the divestiture ordered by this Final Judgment
7 is accomplished, Parker shall retain control and management
8 of its rights, titles, interest and obligations, in the
9 contracts to be divested, subject, however, to actions of
10 the trustee taken for the purpose of effecting the ordered
11 divestiture.

12 E. Parker shall extend its fullest cooperation to said
13 trustee to help him accomplish the divestiture ordered by the
14 Final Judgment.

15 F. In the event Parker reacquires any part of or all of
16 the divestiture accomplished by the trustee pursuant to this
17 Final Judgment, it shall, within one year after such
18 reacquisition, divest in accordance with the provisions of
19 said Final Judgment, that part reacquired.

20 XI

21 For a period of ten years from the date of entry of this
22 Final Judgment, Parker is enjoined and restrained from acquiring
23 more than one (1) percent of the outstanding capital stock of
24 any person engaged in the manufacture or sale of specified fuel
25 system components whose annual sales thereof for the preceding
26 calendar year exceeded \$100,000, or from acquiring capital
27 assets of such person, relating to such person's manufacture
28 or sale of specified fuel system components.

29 XII

30 For the purpose of determining or securing compliance
31 with this Final Judgment, and for no other purpose, duly
32 authorized representatives of the Department of Justice shall,

1 on written request of the Attorney General or the Assistant
2 Attorney General in charge of the Antitrust Division, and on
3 reasonable notice to Parker made to its principal office, be
4 permitted, subject to any legally recognized privilege:

5 A. Access, during the office hours of Parker, who may
6 have counsel or accountants present, to those books, ledgers,
7 accounts, correspondence, memoranda and other records and
8 documents in the possession or under the control of Parker
9 regarding any of the subject matters contained in this Final
10 Judgment; and

11 B. Subject to the reasonable convenience of Parker and
12 without restraint or interference from it, to interview
13 officers or employees of Parker who may have counsel present,
14 regarding any such matters.

15 Upon written request of the Attorney General or the
16 Assistant Attorney General in charge of the Antitrust Division,
17 Parker shall submit such reports, in writing, to the Department
18 of Justice with respect to any of the matters contained in
19 this Final Judgment as may from time to time be requested.

20 No information obtained by the means provided in this
21 Section XII shall be divulged by any representative of the
22 Department of Justice to any person other than a duly
23 authorized representative of the Executive Branch of the
24 United States, except in the course of legal proceedings to
25 which the United States is a party for the purpose of securing
26 compliance with this Final Judgment or as otherwise required
27 by law.

28 XIII

29 Jurisdiction is retained for the purpose of enabling any
30 of the parties to this Final Judgment to apply to this Court
31 at any time for such further orders and directions as may be
32 necessary or appropriate for construction or modification of

1 any of the provisions thereof, or enforcement of compliance
2 therewith, and for the punishment of violations thereof.

3 XIV

4 The Court finds this Final Judgment to be in the public
5 interest.

6 DATED: 9-29-76

7
8 LAWRENCE T. LYDICK
9 UNITED STATES DISTRICT JUDGE
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1 However, if the Armed Services should issue a new
 2 Military Specification with respect to a UARRSI inflight
 3 receptacle, other than Part 2710915, and the prime contractor
 4 for the B-1 determines that said new Military Specification
 5 UARRSI should be used in place of Part 2710915, Parker may
 6 participate in competition for the award of and supply said
 7 procurement for the B-1 notwithstanding its sale of
 8 Part 2710915. Parker is not required to disclose to buyer
 9 any material Parker generated with respect to said Military
 10 Specification item, beyond that required to be disclosed with
 11 Part 2710915.

Item No.	Aircraft Program	Product Description	Part Number
16.	Misc.	Aerial Refueling Nozzle Type MA-2 in accordance with current Spec. MIL-N-25161	8-958-201-1
17.	Misc.	Aerial Refueling Coupling Type MA-2 in accordance with current Spec. MIL-N-25162	7-653-181-2

12 Notwithstanding the foregoing with respect to Aerial
 13 Refueling Coupling Part No. 7-653-181-2, Parker shall be
 14 permitted to retain a right to manufacture and sell said item
 15 and may compete with buyer for sales of the same. Except in
 16 the event that Parker sells a substantial portion of its assets
 17 related to the manufacture of specified fuel system components,
 18 Parker's aforesaid right to manufacture and sell shall be
 19 non-transferable.

20 Parker will supply buyer with whatever information Schulz
 21 had generated in expectation of a new design, revision or
 22 modification of the military specification for the above-
 23 described nozzle and/or coupling prior to the time Parker
 24 acquired Schulz' assets. Further, Parker will supply buyer
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1 with whatever engineering information Parker generated in
2 expectation of such a revision or modification or new design
3 between the time of its acquisition of Schulz' assets and the
4 date of the contract of divestiture. All matters hereinabove
5 notwithstanding, Parker is free to continue to develop and
6 may manufacture and sell any such revision or modification or
7 new design for any use whatsoever.

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SCHEDULE B

PATENTS ISSUED

	<u>PATENT NUMBER</u>	<u>DATE ISSUED</u>
1		
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3		
4	2,836,474	5-27-58
5	2,842,157	7-08-58
6	2,851,055	9-09-58
7	2,854,022	9-30-58
8	2,929,417	3-22-60
9	2,931,506	4-05-60
10	2,946,605	7-26-60
11	2,969,803	1-31-61
12	3,067,972	12-11-62
13	3,086,565	4-23-63
14	3,091,419	5-28-63
15	3,108,769	10-29-63
16	3,126,909	3-31-64
17	3,129,977	4-21-64
18	3,144,056	8-11-64
19	3,172,420	3-09-65
20	3,177,896	4-13-65
21	3,177,889	4-13-65
22	3,182,569	5-11-65
23	3,186,426	6-01-65
24	3,187,133	6-01-65
25	3,207,179	9-21-65
26	3,223,802	12-14-65
27	3,233,058	2-01-66
28	3,237,639	3-01-66
29	3,269,694	8-30-66
30	3,269,736	8-30-66
31	3,352,332	11-14-67
32	3,402,732	9-24-68

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PATENT NUMBER

DATE ISSUED

3,475,001

10-28-69

3,586,033

6-22-71

3,587,622

6-28-71

3,587,678

6-28-71

3,668,076

6-28-71

SCHEDULE C

UNIQUE MACHINES AND SPECIAL TOOLING

RE: FUSelage SHUTOFF VALVE 9-1268-101

<u>TOOL NO.</u>	<u>TOOL DESCRIPTION</u>	<u>TOOL NO.</u>	<u>TOOL DESCRIPTION</u>
TD #15594	Rivet Fixture	TD #16015	Form Tool
F65-0-2095	Test Fixture	TD #16212	Weld Fixture
TD #16185	Test Fixture	TD #14550	Weld Fixture
TD #14779	Flat Form	TD #14780	Flat Form
TD #14784	Step Drill	TD #14672	Mandrel
TD #14781	Step Drill	TD #14782	Round Form
TD #14783	Drill Jig	TD #14935	Flat Form
TD #14934	Gage	TD #14619	Drill Jig
TD #14914	Flat Form	TD #14619	Drill Jig
TD #15143	Draw Die	TD #15144	Draw Die
TD #15145	Sizing Die	TD #15508	Weld Fixture
TD #15509	Weld Fixture	TD #14323	Teflon Cutter

RE: MA2 - AERIAL REFUELING NOZZLE 8-958-201

<u>TOOL NO.</u>	<u>TOOL DESCRIPTION</u>	<u>TOOL NO.</u>	<u>TOOL DESCRIPTION</u>
TD #1623	Hold Fixture	F59-0-1358	Clamping Ring
TD #14709	Chuck Jaws	TD #12602	Flat Form
TD #12603	Flat Form	TD #12604	Round Form
TD #12605	Chuck Jaws	TD #12607	Flat Form
TD #2627	Round Form	TD #1599	Flat Form
TD #2910	Gage	TD #3021	Gage Block
TD #11925	Boring Bar	TD #11926	Groove Tool
TD #2572	Drill Jig	TD #1587	Drill Jig
TD #14050	Tape Fixture	TD 14040	End Mill
TD #1947	Check Fixture	TD #2309	Gage Block
TD #14041	Chamfer Tool	TD #1624	Lettering Fixture
TD #3183	Marking Wheel	F59-5-615	Holding Fixture

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Appendix A [p.20 of 32]

1 RE: MA2 - AERIAL REFUELING NOZZLE 3-958-201 (continued)

2	<u>TOOL NO.</u>	<u>TOOL DESCRIPTION</u>	<u>TOOL NO.</u>	<u>TOOL DESCRIPTION</u>
3	F67-1-24	Trunk Gage	F67-1-25	Snap Roll
4	F42-0-219	Vise Jaws	TD #7947	Flat Form
5	C9-0-545	Flat Form	TD #5125	Hollow Mill
6	TD #5234	Hollow Mill	TD #5128	Flat Form
7	TD #5127	Flat Form	TD #8524	Check Fixture
8	TD #8523	Inspection Template	TD #7425	Arbor
9	TD #13758	Flat Form	TD #14037	Flat Form
10	TD #5683	Chuck Jaws	TD #5129	Round Form
11	TD #5131	Flat Form	TD #5130	Round Form
12	TD #5124	Arbor	TD #5133	Flat Form
13	TD #5132	Recess Tool	F56-0-6	Grind Fixture

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18 RE: AERIAL REFUELING COUPLING - TYPE MA2 - 7-653-181-2

19	<u>TOOL NO.</u>	<u>TOOL DESCRIPTION</u>	<u>TOOL NO.</u>	<u>TOOL DESCRIPTION</u>
20	TD #15572	Rotating Fixture	TD #15573	Clamp
21	TD #15574	Drill Jig	TD #15566	Assembly Hold Fixture
22	TD #15567	Spanner Wrench	TD #15568	Spacer
23	TD #15569	Support Anvil	TD #15570	Hollow Punch
24	TD #15575	Rotating Fixture	TD #2938	Arm Gage Adjustment
25	TD #15571	Spanner Wrench	TD #8175	Flat Form
26	TD #1545	Mill Mandrel	TD #2925	Stake Fixture
27	TD #14356	Roughing Flat Form	TD #14755	Flat Form
28	TD #14754	Flat Form	TD #14753	Flat Form
29	TD #14751	Wrap Around Jaws	TD #14752	Flat Form
30	TD #14796	Wrap Around Jaws	TD #1421	Round Form Tool
31	TD #15469	Flat Form	TD #1589	Mandrel For Tape

1 RE: AERIAL REFUELING COUPLING - TYPE MA2 - 53-181-2 (Continued)

2	<u>TOOL NO.</u>	<u>TOOL DESCRIPTION</u>	<u>TOOL NO.</u>	<u>TOOL DESCRIPTION</u>
3	TD #1505	Drill Jig	F65-1-149	Pressure Test
4				Fixture
5	TD #5688	Chuck Jaws	TD #16128	Spacer Plug
6	TD #15462	Boring Bar	TD #12302	Boring Bar
7	TD #5745	Flat Form	TD #2613	Drill Jig
8	TD #1446	Hold Fixture	TD #6030	Flat Form
9	TD #16124	Flat Form	TD #2541	Checking Gage
10	TD #4162	Chuck Jaws	TD #8409	Template
11	TD #1963	Checking Fixture	TD #1964	Checking Fixture
12	TD #428	Mill Fixture	C12-1-15	Mill Cutters
13	TD #1685	Drill Jig	TD #2611	Inspection
14				Fixture
15	TD #2360	Step Drill	TD #7051	Core Drill
16	TD #361	Round Form	TD #360	Round Form
17	TD #12822	Step Drill	TD #1231	Ring Gage
18	TD #2610	Plugs	TD #2610	Plugs
19	TD #1920	Drill Jig	TD #1369	Drill Jig Base
20	TD #2007	Drill Jig	C12-0-377	Spec. Mill Cutter
21	TD #15370	Chuck Jaws	TD #5559	Chuck Jaws
22	TD #1432	Round Form	TD #1433	Round Form
23	TD #15375	Flat Form	TD #8074	Checking Gage
24	TD #5620	Chuck Jaws	TD #1596	Flat Form
25	TD #1435	Flat Form	TD #1436	Flat Form
26	F67-0-1166	Checking Gage	TD #1549	Mill Fixture
27	TD #4260	Mill Cutter	TD #14480	Flat Form
28	TD #1652	Go & No Go Gage	TD #12453	Jaws
29	TD #7184	Chuck Jaws	TD #4092	Mill Arbor
30	TD #16151	Wood Support	TD #4998	No-Go Gage
31	TD #4998	Go Gage	TD #4482	Flat Form
32				

1 RE: AERIAL REFUELING COUPLING - TYPE MA2 - 7-653-181-2 (Continued)

2	<u>TOOL NO.</u>	<u>TOOL DESCRIPTION</u>	<u>TOOL NO.</u>	<u>TOOL DESCRIPTION</u>
3	TD #447	Hold Down Plate	TD #447	Lathe Fixture
4	TD #448	Drill Jig	TD #6999	Chuck Jaws
5	TD #7237	Chuck Jaws	TD #7934	Pierse & Blank Die
6	TD #1417	Round Form	TD #1418	Flat Form
7	TD #1419	Flat Form	TD #1423	Round Form
8	TD #1424	Round Form	TD #1425	Flat Form
9	TD #382	Drill Jig	TD #2923	Drill Jig
10	TD #15566	Holding Fixture	TD #15567	Spec. Wrench
11	F65-0-2439	Test Base	F65-0-2440	Sleeve Assembly
12	TD #15581	Insert Fixture	TD #15582	Flaring Tool
13	TD #2554	Drill Jig	TD #2780	Mill Fixture
14	TD #12442	Flat Form	TD #12443	Step Drill

17 RE: REGULATOR - 5-1268-251

18	<u>TOOL NO.</u>	<u>TOOL DESCRIPTION</u>	<u>TOOL NO.</u>	<u>TOOL DESCRIPTION</u>
19	TD #14729	Rivet Fixture	TD #14656	Chuck Jaws
20	TD #14950	Flat Form	TD #14695	Drill Jig
21	TD #14694	Holding Plate	TD #14876	Drill Jig
22	TD #14877	Drill Jig	TD #14729	Rivet Fixture
23	TD #14393	Single Cavity	TD #15377	Draw Die
24		Rubber Mold		
25	TD #14648	Drill Jig	TD #14649	Mill Fixture
26	TD #15506	Flat Form Tool		
27	C-12-4-135	End Mill Cutter	TD #14646	Mill Fixture
28	TD #14650	Drill Jig	TD 14342	Drill Jig
29	TD #14985	Flat Form Tool	TD #14336	Flat Form Tool
30	TD #14333	Checking Gage	TD #14333	Spec. MS33619-16
31				Port Tool

1 RE: REGULATOR - 5-1268-251 (Continued)

2	<u>TOOL NO.</u>	<u>TOOL DESCRIPTION</u>	<u>TOOL NO.</u>	<u>TOOL DESCRIPTION</u>
3	TD #14571	Punch Cutter	TD #14571	Punch Cutter
4	TD #14570	Punch Cutter	TD #15422	Slitting Fixture
5	TD #14680	Flat Form Tool		

8 RE: VALVE ASSEMBLY - PRESSURE VENT - 1-470-1

9	<u>TOOL NO.</u>	<u>TOOL DESCRIPTION</u>	<u>TOOL NO.</u>	<u>TOOL DESCRIPTION</u>
10	TD #15547	Rivet Fixture	TD #15556	Form Tool
11	F 80-0-1861	Alt. Tool	F80-0-1862	Sleeve
12	TD #15557	Alt. Sleeve	TD #15061	Hold Fixture
13	TD #15062	Step Drill	TD #15063	Round Form
14	TD #15064	Round Form	F66-0-294	Check Fixture
15	F59-5-566	Hold Fixture	TD #15072	Step Drill
16	TD #15074	Step Drill	TD #15073	Round Form
17	TD #15124	End Mill	TD #13262	Univ. Angel Fixture
19	TD #15066	Round Form	TD #15067	Finish Round Form
20	TD #15439	Rougher Round Form	TD #15438	Round Form
21	TD #15068	Hold Fixture	TD #15069	Step Drill
22	TD #15070	Round Form	TD #15487	Spec. End Mill
23	TD #15065-1	Hold Fixture	TD #14488	Flat Form
24	TD #15065-2	Lathe Fixture	TD #15114	Bore Bar
25	C4-0-142	30 Boring Bar	F49-0-1892	Drill Jig
26	F49-0-1893	Drill Jig	F49-0-1894	Drill Jig
27	TD #15166	Mill Plate	TD #15130	Chuck Jaws
28	TD #15131	Flat Form	TD #15132	Drill Jig
29	TD #15133	Lathe Fixture	TD #15134	Flat Form
30	TD #15090	Chuck Jaws	TD #15091	Drill Jig
31	TD #15036	Flat Form	TD #15087	Flat Form

1 RE: VALVE ASSEMBLY PRESSURE VENT - 1-470-1 (Continued)

2	<u>TOOL NO.</u>	<u>TOOL DESCRIPTION</u>	<u>TOOL NO.</u>	<u>TOOL DESCRIPTION</u>
3	TD #15123	Mill Fixture	TD #15038	Key Cutter
4	TD #15039	Drill Jig	TD #16006	Chuck Jaws
5	TD #15139	Spec. Reamer	TD #15465	Drill Jig
6	TD #15464	Mill Fixture	F67-0-1069	Broach Gage
7	TD #16007	Chuck Jaws	TD #16088	2 Jaw Soft Jaws
8	C3-101-86	90° C' Sink	TD #16106	End Mill Cutter
9	TD #15126	Spec. Reamer	TD #15098	Mill Fixture
10	TD #15099	Drill Jig	TD #15092	Chuck Jaws
11	TD #15093	Flat Form	TD #15094	Round Form
12	TD #15113	Flat Bottom Drill	TD #15095	Drill Jig
13	TD #15096	Step Drill	TD #15034	Flat Form
14	TD #15032	Flat Form Groover	TD #15036	Drill Jig
15	TD #15035	Step Drill	TD #15038	Flat Form
16	TD #15037	Flat Form	TD #15125	Alignment Gage
17	F62-0-1071	Spline Gage	TD #15547	Rivet Fixture
18	TD #14681	Flat Form	C3-103-6	Flat Bottom Drill
19	C9-0-1570	Flat Form Tool	F50-22-90	Top Plate & Nest
20	F57-0-649	Mill Fixture	C6-103-5	Tre-Pan Tool
21	TD #15051	Two Jaws	TD #15052	Flat Form
22	TD #15053	Drill Jig	TD #14332	Flat Form
23	TD #15033	Flat Form Tool	TD #15165	Flat Form Tool
24	TD #4890	Punch Cutter	TD #7350	Punch Cutter
25	TD #10690	Punch Cutter		

26
27
28
29 RE: CHECK VALVE - 1-770-1

30	<u>TOOL NO.</u>	<u>TOOL DESCRIPTION</u>	<u>TOOL NO.</u>	<u>TOOL DESCRIPTION</u>
31	TD #14748	Flat Form Tool	TD #14975	Flat Form Tool
32	TD #14976	Drill Jig		

1 RE: EJECTOR FUEL FEED PUMP ASSEMBLY - 1-1169-1 & 1-1169-1-3

2	<u>TOOL NO.</u>	<u>TOOL DESCRIPTION</u>	<u>TOOL NO.</u>	<u>TOOL DESCRIPTION</u>
3	F30-0-1639	Teflon Spacer	TD #16032	Lining Rods
4	TD #16033	Lining Rods	TD #15196	Chuck Jaws
5	TD #16149	Ring Gage	TD #15197	Lathe Fixture
6	TD #16149	Plug Gage	TD #15198	Lathe Fixture
7	TD #15265	Rough Round Form	TD #15266	Finish Round Form
8		Tool		Tool
9	TD #15200	Drill Jig	TD #15199	Step Drill
10	TD #15201	Drill Jig		
11	TD 16166	Inspection Fixture	TD #16166	Inspection Fixture
12	TD #14691	Soft Jaws	TD #15288	Round Form Tool
13	TD #15212	Drill Jig	TD #15227	Flat Form Tool
14	TD #15228	Reamer	TD #15206	Drill Jig
15	TD #14488	Flat Form Tool	TD #15297	Chuck Jaws
16	TD #15302	Spec. Boring Bar	TD #15303	Lathe Template
17	C9-0-2020	Flat Form	F67-0-1206	Flush Pin Gage
18	TD #15315	Mill Cutter	F49-0-2356	Drill Jig
19	TD #15284	Flat Form	TD #16032	Gage Pin
20	F30-0-1639	Teflon Spacer	TD #16033	Gage Pin
21	TD #15533	Test Fixture		

23 RE: WING TANK PILOT VALVE - 2-669-1

24	<u>TOOL NO.</u>	<u>TOOL DESCRIPTION</u>	<u>TOOL NO.</u>	<u>TOOL DESCRIPTION</u>
25	TD #7202	Bake Fixture	TD #16177	Test Fixture
26	TD #23-455-	Brinell Fixture	F65-0-2174	Fitting
27	2001-2	23-455-2001-2		
28	F65-0-2175	Fitting	TD #14539	Chuck Jaws
29	TD #14578	Flat Form	TD #14540	Drill Jig
30	F65-0-2175	Test Fixture	F65-0-2429	Test Fixture
31	TD #14543	Chuck Jaws	TD #14534	Step Drill
32	TD #14535	Flat Form	TD #14544	Drill Jig

1 RE: WING TANK PILOT VALVE - 2-669-1 (Continued)

2	<u>TOOL NO.</u>	<u>TOOL DESCRIPTION</u>	<u>TOOL NO.</u>	<u>TOOL DESCRIPTION</u>
3	TD #14546	Lathe Fixture	TD #14545	Flat Form
4	TD #14547	Mill Fixture	F65-0-2135	Test Fixture
5	TD #14502	Chuck Jaws	TD #14505	Flat Form
6	TD #14503	Tape Hold Fixture	TD #14504	Tape Hold Fixture
7	TD #14506	Round Form	TD #14509	Step Drill
8	TD #14507	Step Drill	TD #14508	Step Drill
9	TD #4964	Key Cutter	TD #14548	End Mill
10	TD #14510	Drill Jig	TD #14273	Float Mold
11	TD #14908	Draw Die	TD #14581	Pierce & Cam Die
12	TD #14582	Spot Weld Fixture	TD #14577	Press Fixture
13	TD #14513	Flat Form	C1-0-2231	Step Drill
14	TD #14516	C' Bore Tool	C1-0-2232	C' Bore Tool
15	TD #14512	Flat Form	TD #14514	End Mill
16	TD #15047	Flat Form	TD #15048	Step Drill
17	TD #15049	Round Form Tool	TD #15050	Cam's
18	F80-0-1604	Press Fixture	TD #2992	Drill Jig
19	TD #11061	Teflon G/C Cutter	TD #8784	Braze Fixture
20	TD #2950	Form Tool	TD #8890	Expanding Mandrel
21	TD #8891	Flat Form	TD #8079	Drill Jig
22	TD #6011	Step Drill	F49-0-2124	Drill Jig
23	F66-0-307	Check Fixture	TD #7965	Set Cam's
24	TD #7969	Flat Form	TD #8029	Flat Form Tool
25	TD #15505	Groove Tool	TD #7958	Blank & Pierce Die
26	TD #7959	Form Die		

28 RE: VALVE PILOT LOW LEVEL PRESSURE VENT VALVE - 2-470-1

29	<u>TOOL NO.</u>	<u>TOOL DESCRIPTION</u>	<u>TOOL NO.</u>	<u>TOOL DESCRIPTION</u>
30	C15-0-137	Swage Fixture	F80-0-1604	Thread Adapter
31	TD #16103	Bake Fixture	F80-0-1928	Assembly Fixture
32	TD #16177	Test Fixture	23-455-2001-2	Brinell Fixture

1 RE: VALVE PILOT LOW LEVEL PRESSURE VENT VALVE - 2-470-1 (Continued)

2	<u>TOOL NO.</u>	<u>TOOL DESCRIPTION</u>	<u>TOOL NO.</u>	<u>TOOL DESCRIPTION</u>
3	F65-0-2099-9	Test Fixture	F80-0-1928	Installation Tool
4	TD #15012	Hold Fixture	TD #15017	Step Drill
5	TD #15013	Holding Fixture	TD #15015	Step Drill
6	TD #15016	Round Form	TD #15019	Step Drill
7	TD #15014	Hold Fixture	TD #15018	Step Drill
8	TD #15022	Hollow Mill	TD #15020	Drill Jig
9	TD #14714	Float Mold	TD #15042	Flat Form Tool
10	TD #15045	Flat Form	TD #15043	Round Form
11	TD #15044	Step Drill	TD #3433	Cutter
12	TD #7506	Baking Mold	TD #3604	Punch Cutter
13	TD #14611	Flat Form	TD #14612	Flat Form
14	TD #15135	Drill Jig	TD #7958	Pierce & Blank Die
15	TD #7959	Form Die	TD #2950	Form Tool
16	TD #8890	Exp. Mandrel	TD #8891	Flat Form
17	TD #8079	Drill Jig	TD #6011	Step Drill
18	F49-0-2124	Alternate Drill Jig	F66-0-307	Checking Fixture

19

20 RE: FUEL RECHECK MANIFOLD - 1-969-1

21	<u>TOOL NO.</u>	<u>TOOL DESCRIPTION</u>	<u>TOOL NO.</u>	<u>TOOL DESCRIPTION</u>
22	TD #10435	Staking Tool	TD #10680	Sleeve Assembly Tool
23				
24	TD #14626	Tape Hold Fixture	TD #14680	Spec. End Mill Cutter
25				
26	TD #14647	Round Form Tool	TD #14430	Tape Hold Fixture
27	TD #14533	Step Drill	TD #14585	Round Form Tool
28	TD #14536	Round Form Tool	TD #14584	Hollow Mill Cutter
29	TD #14537	Sleeve	TD #12860	Groove Tool
30	TD #14434	Groove Tool	TD #14978	Tape Hold Fixture
31	TD #14979	Hold Fixture	TD #14981	Step Drill
32	C29-0-163	Spot Face Tool	C9-0-1974	Flat Form

1 RE: FUEL RECHECK MANIFOLD - 1-969-1 (Continued)

2 <u>TOOL NO.</u>	<u>TOOL DESCRIPTION</u>	<u>TOOL NO.</u>	<u>TOOL DESCRIPTION</u>
3 H3-1-100-18	Flat Bottom Drill	C-1-0-1920	Form Reamer
4 F50-25-86	Top Tray and Pusher	TD #10435	Staring Tool
5 TD #10195	Lathe Mandrel	TD #10194	Flat Form
6 TD #7038	Punch Cutter	TD #4270	Punch Cutter

7
8 RE: IFR PROBE MAST - 4-569-1

9 <u>TOOL NO.</u>	<u>TOOL DESCRIPTION</u>	<u>TOOL NO.</u>	<u>TOOL DESCRIPTION</u>
10 TD #15535	Inserting Tool	TD #14386	Checking Fixture
11 TD #15010	Heat Treat Fixture	F55-0-741	Lathe Fixture
12 F49-0-2050	Drill Jig	TD #14658	Step Drill
13 TD #14659	Drill	F40-0-793	Chuck Jaws
14 TD #14655	Drill Jig	C1-8-38-44	100° C'Sink
15 F40-0-793	Chuck Jaws	TD #14655	Drill Jig
16 TD #14409	Chuck Jaws	TD #14888	Drill Jig
17 TD #14387	Lathe Fixture	TD #16026	Drill Jig
18 F42-0-212	Vise Jaws	F49-0-1912	Drill Jig
19 F55-0-798	Lathe Fixture	F57-0-635	Mill Fixture
20 F57-0-653	Mill Fixture		

21
22 RE: PILOT OPERATED SHUT-OFF VALVE - 7-1268-1 (2730623)

23 <u>TOOL NO.</u>	<u>TOOL DESCRIPTION</u>	<u>TOOL NO.</u>	<u>TOOL DESCRIPTION</u>
24 C32-0-82	Nest Fixture	C32-0-82-1	Header
25 C32-0-82-2	Header	TD #14256	Rivet Fixture
26 F80-0-1969	Assembly Fixture	F80-0-1860	Sleeve Assembly
27 F80-0-1970	Locator Assembly	F80-0-1841	Spanner Wrench
28 F66-0-369	Inspection Gage	F65-0-2056	Assembly Fitting
29 TD #14484	Drill Jig	TD #14485	Reamer
30 TD #14486	Form Tool	TD #14487	Lathe Fixture
31 C9-0-2021	Form Tool	TD #14489	Drill Hold Fixture
32 TD #14490	Tape Hold Fixture	C6-0-422	Trepan Tool

U.S. Mot. and Mem. to Term.

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1 RE: PILOT OPERATED SHUT-OFF VALVE - 7-1268-1 (2730628) (Continued)

2	<u>TOOL NO.</u>	<u>TOOL DESCRIPTION</u>	<u>TOOL NO.</u>	<u>TOOL DESCRIPTION</u>
3	TD #14613	Flat Form	TD #14682	Flat Form
4	F49-0-2304	Drill Jig	TD #14614	Drill Jig
5	TD #14615	Vise Jaws	TD #14617	Flat Form
6	TD #14618	Flat Form	TD #14553	Drill Jig
7	TD #5968	Punch Cutter		

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9
10 RE: AERIAL REFUELING RECEPTACLE - 1-270-1 (2710942 M3)

11	<u>TOOL NO.</u>	<u>TOOL DESCRIPTION</u>	<u>TOOL NO.</u>	<u>TOOL DESCRIPTION</u>
12	TD #16154	Spanner Wrench	TD #16155	Test Adapter
13	TD #14433	Roller Gage	F65-0-2107	Test Fixture
14	TD #16156	Compression Tool	F65-0-2169	Test Fixture
15	F65-0-2239	Proof Adapter	F67-0-1168	Functional Gage
16	V9-0-112	Flat Form Tool	TD #14499	Drill Jig
17	TD #14043	Flat Form Tool	TD #11080	Flat Form Tool
18	TD #12299	Flat Form Tool	TD #12230	Round Form
19	TD #13349	Round Form Tool	TD #11607	Step Drill
20	TD #13508	Chuck Jaws	TD #11608	Flat Form Tool
21	TD #13511	Spade Drill	TD #4755	Drill Jig
22	TD #12558	Drill Plate	F49-0-2120	Pierce Die
23	TD #11591	Rivet Fixture	TD #12700	Drill Jig
24	TD #13024	Mill Fixture	TD #11617	Form Tool
25	TD #16012	Spline Ring Gage	F67-0-1109	Spline Ring Gage
26	F67-0-1110	Master Gage	TD #14956	Wrench
27	RF9804DW	Removal Tool	RF9806DW	Driver Tool
28	TD #14956	Span Wrench	4-1265-2301	Test Fixture
29	TD #13093	Rivet Fixture	F30-0-1694	Rod End Fixture
30	TD #14956	Spanner Wrench	4-1265-2301	Test Fixture
31	TD #13093	Drill & Rivet	TD #13092	Flat Form
32		Fixture		

1 RE: AERIAL REFUEL RECEPTACLE - 1-270-1 (2 0942 M3) (Continued)

2	<u>TOOL NO.</u>	<u>TOOL DESCRIPTION</u>	<u>TOOL NO.</u>	<u>TOOL DESCRIPTION</u>
3	TD #13093	Flat Form	TD #13094	Flat Form Tool
4	TD #13096	Drill Jig	TD #13095	Flat Form Tool
5	TD #13308	Flat Form	F80-0-287	Nest Punch
6	TD #11621	Drill Jig	TD #12447	Broach Fixture
7	TD #12719	Broach	TD #13365	Carbide Reamer
8	TD #14102	Mill Fixture	F67-0-1108	Spline Gage
9	TD #11520	Cams	TD #11521	Flat Form Tool
10	C1-0-1798	Form Reamer	TD #11600	Flat Form Tool
11	TD #11602	Flat Form Tool	TD #11603	Drill Jig
12	F65-1-1	Test Fixture	TD #13046	Flat Form Tool
13	F43-0-121	Spec Collet	TD #13116	Flat Form
14	TD #13117	Flat Form Tool	TD #16157	Pin Flaring Tool
15	F65-0-2107	Test Fixture	C9-102-15	Groove Tool
16	F49-0-2333	Drill Jig	F67-0-1168	Drill Gage
17	F57-0-747	Mill Fixture	C12-0-460	Mill Cutter
18	F57-0-747	Mill Fixture	F57-0-746	Mill Fixture
19	F49-0-2332	Drill Jig	F55-5-17	Holding Fixture
20	F55-5-18	Holding Fixture	F67-0-1207	Checking Gage
21	F67-0-1168	Functional Gage		

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23
24 RE: UARRSI - 2710915

25	<u>TOOL NO.</u>	<u>TOOL DESCRIPTION</u>	<u>TOOL NO.</u>	<u>TOOL DESCRIPTION</u>
26	2723214	Test Panel	2723215	Test Panel

1 RE: CASTING TOOLING TO PRODUCE THE FOLLOWING PART NUMBERS:

2	1-369-3	1-470-3	1-470-4	1-470-5
3	1-470-6	1-470-7	1-470-8	1-470-9
4	1-969-3	1-969-7	1-1169-3	1-1169-5
5	1-1169-6	1-1169-7	2-470-3	2-669-3
6	2-669-4	4-569-4	4-569-6	4-569-11
7	4-569-13	4-569-14	4-569-15	4-569-17
8	4-569-21	4-569-22	5-1268-103	5-1268-106
9	5-1268-115	5-1268-116	5-1268-118	5-1268-125
10	7-653-3	7-653-12	7-563-14	7-653-15
11	7-653-17	7-653-23	7-653-24	7-653-43
12	7-653-46	7-653-77	7-653-82	7-653-85
13	7-653-88	7-653-89	7-653-90	7-653-92
14	7-653-93	7-653-94	7-653-105	7-1268-3
15	8-958-3	8-958-105	2731454	2732999-11
16	2712751-11	2-1163-168-11	4-1265-31-11	4-1265-41-3
17	2712736-11	2712719-11	2731705	2721776
18	2712751-11	2721747	2721749	2712719-11
19	2712745-11			
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