Commissioner of Patents and Trademarks
Box Assignment, Washington, D.C. 20231

To the Honorable Commissioner of Patents and Trademarks: Please record the attached original documents or copy thereof.

1. Name of conveying party(ies):
   Hidenobu MUTO
   Hisashi IIDAA
   Shujiro MORINAGA

2. Name and address of receiving party(ies):
   Name: DENSO CORPORATION
   Internal Address:
   Street Address: 1-1, Showa-cho
   City: Kariya-City, Aichi-Pref.
   State/Country: Japan
   Zip: 448-8661

3. Nature of conveyance:
   - [ ] Assignment
   - [ ] Merger
   - [ ] Security Assignment
   - [ ] Change of Name
   - [ ] Other

Additional name/s of conveying party/ies attached? [ ]
Execution Date: 07 July 1998

4. Application number(s) or patent number(s):
   If this document is being filed together with a new application, the execution date of the application is:
   07 July 1998

   A. Patent Application No(s).
      (1) (To Be Assigned)
      (2)
      (3)

   Additional numbers attached [ ]

5. Name and address of party to whom correspondence concerning document should be mailed:
   Name: Larry S. Nixon
   Internal Address:
   Street Address: Nixon & Vanderhye P.C.
   1100 North Glebe Road
   8th Floor
   City: Arlington
   State: VA
   Zip: 22201

6. Total number of applications & patents involved: 1

7. Total fee (37 CFR 3.41)
   [ ] Enclosed
   [ ] Authorized to be charged to deposit account #14-1140

8. The Commissioner is hereby authorized to charge any deficiency in the fee(s) filed, or asserted to be filed, or which should have been filed herewith (or with any paper thereafter filed in this application by this firm) to our Account No. 14-1140.

DO NOT USE THIS SPACE

To the best of my knowledge and belief, the foregoing information is true and correct and any attached copy is a true copy of the original document.

Larry S. Nixon
Name of Person Signing
Reg. No. 25,640

Signature
Date: July 22, 1998

Total number of pages including original cover sheet, attachments, and document: [2]
ASSIGNMENT OF WORLDWIDE PATENT RIGHTS

(Inventors)

Hidenobu Muto
Hisashi Tida
Shujiro Morinaga

(Assignee)

DENSO CORPORATION
1-1, Showa-cho, Kariya-city, Aichi-pref., 448-8661 Japan

(Address)

(hereinafter designated as the Assignee) the undersigned’s entire right, title and interest
for the entire world and all countries including the United States, its territories, dependencies
and possessions in the invention, and all applications for patent and any Letters Patent
which may be granted therefore, known as

(Title)

AIR-FUEL RATIO CONTROL APPARATUS AND METHOD FOR INTERNAL COMBUSTION ENGINE
for which the undersigned has (have) executed on even date herewith an application for
patent in the United States of America or, if not on even date, then has executed on

The undersigned acknowledges an obligation of assignment of this invention to said
assignee at the time the invention was made.

The undersigned agree(s) to execute all papers and documents necessary in connection with the
application or any interference which may be declared and any continuing or divisional applications thereof
and also to execute separate assignments in connection with such applications as the Assignee may
demn necessary or expedient and further to perform any act which may be necessary in connection with
claims or provisions of the International Convention for Protection of Industrial Property or similar
agreements.

The undersigned agree(s) to perform all affirmative acts which may be necessary to obtain a grant
of a valid United States patent to the Assignee.

The undersigned hereby authorize(s) and request(s) the Commissioner of Patents to issue any
and all Letters Patent of the United States resulting from said application or any division or divisions or
continuing applications thereof to the said Assignee, as Assignee of the entire interest, and hereby
covenants that he has (they have) full right to convey the entire interest herein assigned, and that he has
(they have) not executed and will not execute, any agreement in conflict herewith.

The undersigned hereby grant(s) the firm of NIXON & VANDERHYE P.C. the power to insert on
this assignment any further identification which may be necessary or desirable in order to comply with the
rules of the United States Patent Office for recordation of this document.

In witness whereof, executed by the undersigned on the date(s) opposite the undersigned
signature(s):

Date July 7, 1998 Signature of inventor Hidenobu Muto
Date July 7, 1998 Signature of inventor Hisashi Tida
Date July 7, 1998 Signature of inventor Shujiro Morinaga

Witnessed by: __________________________________________ Date: __________________
Witnessed by: __________________________________________ Date: __________________